DOMESTIC ENGINEERING

A Weekly Record of Progress in Plumbing, Heating, Ventilation and all Matters Pertaining to Domestic Sanitation

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Complete victory has brought us not peace alone but the confident promise of a new day as well, in which justice shall replace force and jealous intrigue among the nations. Our gallant armies have participated in a triumph which is not marred or stained by another purpose of selfish aggression. In a righteous cause they have won immortal glory and have nobly served their nation in serving mankind.—From President Woodrow Wilson's Thanksgiving Proclamation.

MASTER PLUMBERS CAN PROFIT BY LESSON IN TRADE EXTENSION BY RETAIL DRUG STORE.

THERE is a certain percentage of plumbing contractors, not large, however, who are following in the footsteps of the modern druggist who broke all the rules of the apothecary game some years ago, when he decided that the business of merely filling prescriptions and selling a few drugs, etc., was too slow a proposition.

He therefore adopted the policy of trade extension or, call it, sales expansion. He commenced to carry accessories and sidelines, more or less related to drugs, usually less, as for instance shower bath equipment to be attached to tub, toilet paper, soaps, all of which the plumber could just as well sell as the druggist.

Today the modern drug store stands as a remarkable lesson in intensive salesmanship. It reminds one of a department store on a small scale.

Consider the astonishing development of the old apothecary with its mortar and pestle suspended over the door as the symbol of the drug business. Consider, too, the proprietor, whose work was principally that of filling prescriptions, and who was hanging on and tugging and straining all the time to make a decent go of his business.

All this has changed; the old order of things has passed. The old apothecary or chemist shop is gone forever.

The contrast between the old-time apothecary and the modern drug store is about equal to the difference between "Ye Olde Plumbing Shop," exhibited at the St. Louis convention of the National Association of Master Plumbers, and the present-day plumbing establishment equipped with an attractive showroom and window display.

On page 290 in this issue of "Domestic Engineering" is a story entitled: "The Plumber and the Druggist," which treats of the case of a plumbing contractor, who, after years of tugging and straining for substantial profits, finally broke away from the beaten path, and adopted the druggist's policy of trade extension or sales expansion—not on the same extensive scale, however, but broad enough to apply logically to the plumbing business.

The problem today with the average plumbing business is the same as that of the druggist or any other retailer. It is the problem of making more sales grow in the field of business.

Collectively speaking, the plumbing craft has not kept pace with the retail druggist, who had the courage to cast apothecary traditions to the winds and branch out strong in the selling field.

The traditions of business, handed down from the pioneers in either the plumbing or drug fields, are not in accord with the spirit of present-day conditions. Times and conditions change, and men and institutions—though deep rooted—must change also or be left far behind in the irresistible sweep of progress.

Despite the objections or the lack of interest shown by the "standpatters" in the plumbing craft, who insist that the plumber's province is the same as it always was—to install materials, there is an element of progressives in the trade which is ignoring the traditions of "ye olden days."

The number of these progressives is increasing gradually year after year. They have evidently taken seriously to heart the lesson of sales expansion, which the modern druggist's example has taught them. They have caught the spirit of his extended selling methods and annexed it to the business of installing plumbing fixtures.

Upon entering their stores you see a window display, changed to suit the seasons, and as interesting as that of any other retailer on the street, and replete with appropriate sidelines and sanitary accessories.

These are the plumbing contractors who are following in the footsteps of the neighboring druggist. Like him they are now making many customers grow where only a few grew before. They are blazing the trail for a new era of trade expansion in the realm of plumbing—an era of extended salesmanship.

MAKING *a* LEAD GREASE TRAP

Wiping on the Clean-out Caps, Bending the Lead Waste Pipe, and Wiping to Trap

By Robert J. Gordon

IN preceding articles we have described and illustrated a process of caking the body of an 8-pound lead grease trap for use under a kitchen sink where it may be impossible or unsuitable to get a ready made grease trap.

The trap is cylindrical in form with ends wiped on. The inlet pipe from sink is 1½-inch lead and enters side

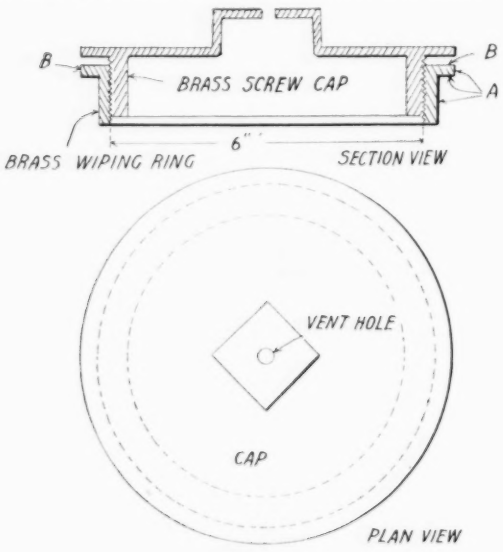


Fig. 1.

of trap about 2 inches above the bottom with a short bend.

The outlet pipe is taken from the opposite side of trap at the same height and in a similar manner.

A sheet lead partition, 5 inches high, is soldered across trap inside and at the bottom, to baffle the flow of the greasy water.

A 6-inch brass screw cap is wiped on top of trap for cleaning purposes, a ⅛-inch vent hole being drilled in top of cap for air-relief.

The outlet pipe is bent up, then turns to wall where it connects with a waste pipe vented on continuous vent plan, a 1½-inch brass screw-cap clean-out being wiped on outer curve of upper bend.

That was all described and illustrated in previous issues of "Domestic Engineering." Now we will finish up the subject by describing how the several pipes and screw caps were prepared and wiped to the trap.

We begin with the 6-inch screw-cap, on top of trap, which is shown in plan and section in Fig. 1.

First, file the surfaces A all around the brass wiping ring which is threaded inside to receive the cap. These surfaces have to be wiped to the lead trap. Therefore, they must be previously tinned in a careful manner.

Having filed them bright and clean all around, rub powdered resin on them. Then paint the top edge B, also the thread inside, with good quality soil to prevent solder sticking to them.

Next, take the copper bit and a stick of clean half and half solder and tin the surfaces A all around, using more powdered resin for the flux, if required. Now the ring is ready for wiping, but to prevent solder from falling inside while the wiping is being made, pack a wad of newspaper solidly inside the ring. Having prepared the hole in top of trap to receive the wiping ring, set it in place, beating the edge of lead close against the ring to prevent solder from running through and into the trap.

Fig. 2 shows the ring and part of trap in half elevation and half section. The ring is shown wiped on and the paper plug still in it. The shape of wiping shown is about right. It is strong and quite neat. To make this wiping pour molten solder slowly around the wiping, but not enough in one place to burn a hole through the lead.

Keep on pouring and working the plastic solder well up into the seam until all the seam is covered with a body of metal, which runs down like molasses. Then stop pouring for now the heat is up.

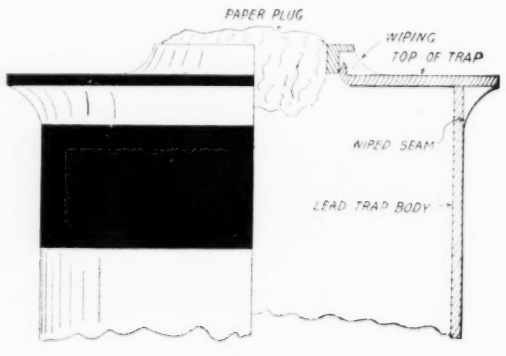


Fig. 2.

Pile up the plastic metal all around the seam, and the instant it stays up, form the joint and finish it quickly by running the cloth around it, the middle finger bearing hard into middle of cloth to give the correct curve to the wiping. Be sure that the edges are wiped clean and down to the edge of the cleaning, and finish off the last wipe

with a quick tangential "swipe" of the cloth, or by a neat delicate cross-draw, which will finish the wiping so neatly that an ordinary person will not see where the wiping is finished.

The next step is to bend and wipe on the inlet and outlet pipes. Consider the inlet pipe first, as this pipe has to be bent. Cut a piece of pipe a little longer than is required. Drive a wood plug in one end. Have some dry sand ready in a box. Fill the pipe with the sand as at A in Fig. 3. Pack the sand in the pipe well by beating side of pipe all over with a flat block of wood or a dresser. When sand will not pack any more, drive a wood plug in the other end of pipe clear down to the sand. Now bend pipe over the knee; make the bend as short and sharp as possible without tearing the outer curve or heel. Remove the plugs. Pour out the sand. Saw the ends of bend the right length, and prepare them for wiping. Or, if you have a 1½-inch bending spring, you can make the bend quicker and just as well. Grease the spring. Insert it in end of pipe, after pipe has been dressed straight and true and all kinks have been removed. Then bend the pipe over the knee where the spring is located.

The spring does what the sand did. It prevents the

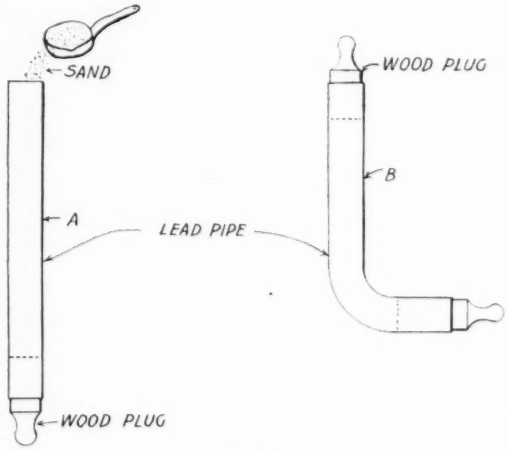


Fig. 3.

sides of pipe from collapsing while being bent. Having obtained the correct shape at bend, turn spring and pull it out while turning, but turn it the right way so as to reduce its diameter, and it will come out easily.

Having acquired the bend, saw off the ends to the right length, making the bend as short as possible. Now rasp the ends and prepare them both for wiping, the upper end to the coupling of the sink strainer and the lower end to the side of grease trap. Soil the ends back about 3 or 3½ inches, and shave them about 1 inch.

Fig. 4 shows the lower end of bend prepared, greased and ready for "fixing" over hole in trap body for wiping. The hole is shown by sectional view at right of Fig. 4. It has been scooped out with a reamer, then the edges are worked outward a little with a bending pin or handle of dresser, and finally hole is rounded off and made conical to fit end of bend, by the use of a turn pin.

The cleaning around this hole appears something like Fig. 5, being about one inch wide. It is shaved clean and greased after the soil has been applied around the hole to a distance of about 2½ to 3 inches beyond the cleaning. To wipe the lead bend here place the trap body horizontally on bench, blocking the sides to keep it from rolling. Next place the inlet bend in hole, fix the pipe steady with blocks and string, or whatever may be at hand, then proceed to wipe the joints, as in Fig. 6. Paste a piece of paper over the seam already wiped on bottom to protect it from the solder which certainly will fall on it while joint is being wiped. Pour on the metal

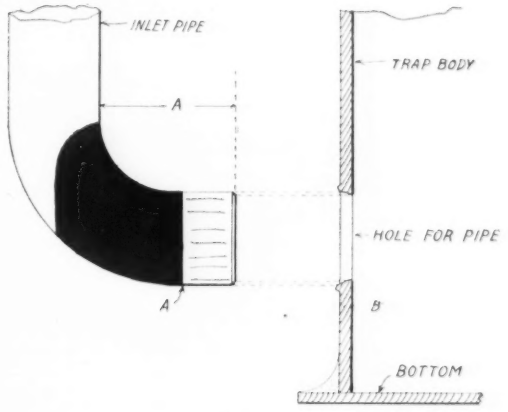


Fig. 4.

uniformly all around the joint, using a splash stick, if necessary, to get it well under the bend. Work the plastic metal well up against the joint and up on the soiled part of bend to get up the heat. As soon as heat is up and the metal is sliding down all around, begin to wipe, but keep up the metal. Form around the top first, then quickly form around the bottom, leaving an abundance at the middle; then quickly finish the middle and all around with long steady sweeps. The form shown is a good one. There is neither too much nor to little solder on the joint.

You may finish where the cloth is shown, or at the opposite side or anywhere, so long as you finish quickly and neatly. A good joint wiper can easily wipe a joint as neat as that shown in Fig. 6.

The next step is to bend the outlet pipe to the proper shape. As can be seen, in previous illustrations, this pipe

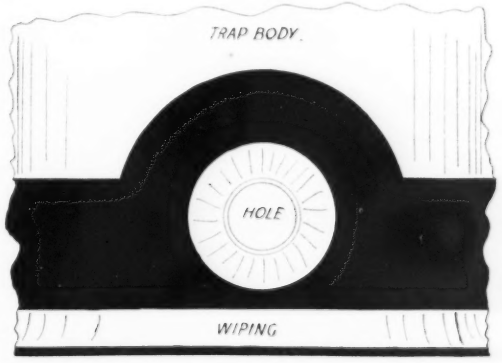


Fig. 5.

has two bends. One turns in to the trap, the other turns to the wall. The bends, however, can be made as easily as that previously referred to on the inlet pipe. The lower bend on outlet pipe is cut off, prepared and wiped to trap body exactly the same as the inlet bend. On the upper bend of outlet pipe, however, is a clean-out screw cap. This has to be wiped to bend.

Fig. 7 shows how the waste pipe may appear, the trap body not being shown. The lead waste is bent and cut

to length after the brass solder nipple has been tinned and screwed or calked into the waste stack inside the wall. Then a hole is gouged in outer curve of upper bend, reamed out to fit the wiping ring of the clean-out screw. It is then soiled, shaved and greased, the cleaning being about three-fourths of an inch wide. The wiping ring is then tinned the same as that of the large clean-out on

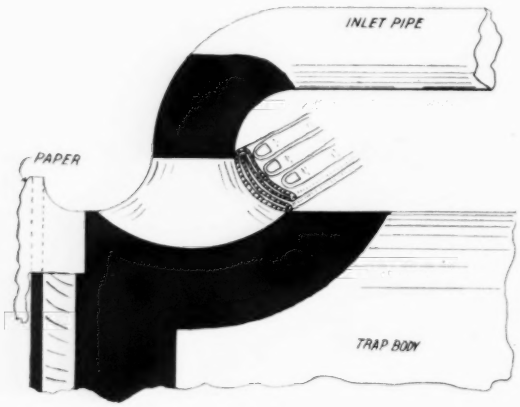


Fig. 6.

top of trap. A paper plug is driven inside the ring and the ring is wiped to pipe as previously described.

In locating this clean-out, it is advisable to have it in the middle of outer curve of bend so that wires or rods can easily be pushed inside the pipe either toward the trap or toward the waste stack. One never knows which pipe may become choked. It is therefore a good plan to have the clean-out so that rods can be easily run either way. Having wiped on this ring, soiled both ends of the pipe, cleaned, shaved and greased them for wiping, the pipe is fitted to trap on the bench and wiped there the same as is shown in Fig. 6.

After this joint is wiped, the next step is to set the trap in position, assuming that waste coupling under sink

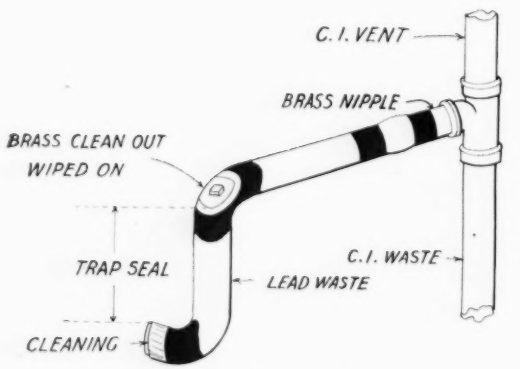


Fig. 7.

has already been wiped to inlet pipe, then the outlet pipe is wiped to the brass nipple, which is shown screwed into the sanitary tee on the stack.

Of course, the escutcheon plate will be slipped over the nipple first if it is in one piece. If nipple is very short and there is but little space for wiping, a split or hinged escutcheon plate may be used in its stead.

Some people may prefer to use a brass union with coupling tail for wiping instead of a solid brass nipple, so that entire trap can be disconnected and removed at any time. But if a union coupling is used, it should be of the ground union, or metal to metal variety.

Unions with leather or rubber washers should not be used anywhere on the sewer side of a trap seal, as the washers are liable to get brittle and leak.

After the trap is all connected up complete, it is only proper for the plumber to put on a few neat finishing touches. He should wipe off all the lead work and rub it up to a uniform polish. The joints, however, should not be touched unless they are chalky or irregular in color. Then they may be polished with clean, fine sandpaper to make them shine. The soiling should then be all touched up so as to cover any spots made bare by the wiping. In fact, it is usually advisable to repaint all the exposed soiling. The trap will now be very neat and artistic. It will be a credit to the plumber who made it and will not mar the appearance of a neat kitchen.

Now we have finished our rather extended description of the manufacture of a lead grease trap by a plumber on the job, and we will close by repeating that it is usually advisably to buy brass or iron grease traps, which are furnished to the trade by manufacturers and supply houses.

Finis.

THE FOURTH LIBERTY LOAN GREATEST SINGLE EVENT IN FINANCIAL HISTORY.

The United States Government asked a loan from the people of the country of $6,000,000,000, an amount unprecedented in all the history of the world. In three weeks' time, in spite of an epidemic of influenza which prevented public meetings and cost the people many millions of dollars in medical bills and lost time, and in spite, too, of the peace rumors that in some instances had a tendency to make the success of the loan seem less vital, some 21,000,000 of the American people offered to the Government $6,866,416,300. Each Federal Reserve district oversubscribed its quota. Thousands of cities, towns and communities oversubscribed their quotas. Secretary McAdoo says that the Fourth Liberty Loan is the greatest single event in financial history.

The Fourth Loan was called the fighting loan; it is a record of Americanism comparable with the record that our soldiers on the battle fronts and our sailors on the seas made. The people at home have given loyal support to our fighting men.

A Liberty Loan is a certificate of patriotism; keep it to show to our boys when they come back from Europe.

FOR OUR DEAD.

For you our dead, beyond the sea,
Who gave your lives to hold us free,
By us, who keep your memory,
What can be said?

We cannot sing your praises right,
Lost heroes of the endless fight;
Whose souls into the lonely night,
Too soon have fled.

We can but honor, cherish, bless,
Your sacred names; no words express
The measure of our thankfulness,
To you our Dead.

—By Sir Sidney Low, in "London Daily Chronicle."

The REMOVAL *of* MOISTURE *from* SPECIAL ROOMS *and* BUILDINGS

Notes on the Installation of Proper Ventilating Systems in Laundries, Dye Houses, Paper Mills, Foundries, Flax Mills, Etc.

By Charles L. Hubbard

IN the present discussion we will consider a class of rooms and buildings, which are impossible to ventilate properly by the usual methods applied to buildings of the ordinary type. In this class are included all spaces containing an excessive amount of water vapor, such as dye houses, laundries, the machine rooms of paper mills, foundries, wet-spinning rooms in flax mills, etc.

As is well known to those familiar with dye house ventilation, the greatest trouble arises from the condensation of the vapor, which is continually rising in clouds from the dye kettles and tubs. When the steam comes in contact with the cool air which is flowing in from doors, windows or roof ventilators, it condenses rapidly, sinking toward the floor and thus obscures the view.

It is not uncommon in otherwise well ventilated plants to find the dye rooms cold and damp and filled with vapor during the winter months, a condition which causes the efficiency of the workers in these departments to fall off rapidly.

Laundries, on the other hand, are apt to become overheated, and as the air contains a high percentage of moisture, the conditions are very enervating to those employed there. While open windows and roof ventilators may answer all purposes in warm weather, the free admission of cold air in the winter causes dangerous drafts and excessive condensation.

In this connection it may be interesting to quote the manager of a large city laundry, in which an efficient ventilating equipment has recently been installed. Among other things, he says: "The ventilating outfit was put in several months ago, with the result that the help have found the laundry a pleasant place in which to work, and in consequence the attendance has been quite regular. Instead of the great change of help which has been experienced in the past it has dropped to a figure of less than 5 per cent, so that the company has not been under the necessity and expense of training new hands or of expending energy in rectifying the mistakes of either new hands or of those who lose interest in their work when done under the oppressive conditions common to most laundries."

The machine room of a paper mill requires special methods of ventilation, owing to the large amount of moisture given off by the drying paper, which amounts to approximately one and one-half tons per ton of finished product. If this moisture is not quickly removed, it produces a heavy fog, which rapidly condenses upon contact with the cool side walls and roof, thus causing continuous dripping upon the operatives and upon the paper in process of manufacture. Furthermore, the high temperature and extreme humidity are very enervating to those employed in rooms of this kind.

During certain processes in foundry work the air is filled with steam and heavy gases, at which times ventilation by means of skylight or monitor windows, except in warm weather, only serves to make conditions worse, as the entering cold air causes the steam to condense on the walls and overhead construction and drip to the floor.

While flax mills are not common in this country, the conditions usually found in the wet-spinning rooms call for special means of ventilation, as they are much the same as in dye houses when the air is saturated with moisture,

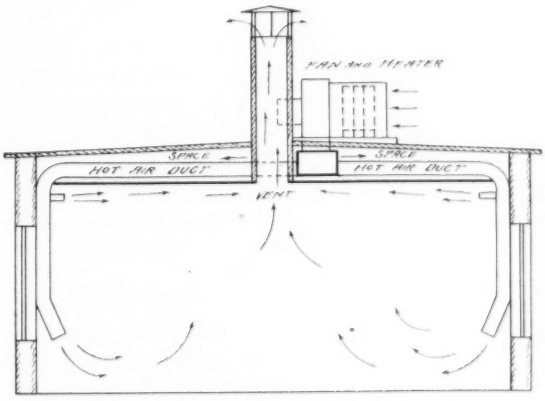


Fig. 1.

which condenses and drips upon the operatives and machinery in cold weather.

Computations Involved in the Removal of Moisture.

In order to understand clearly the methods involved in ventilating spaces of the kind mentioned it is necessary to be familiar with certain definitions relating to humidity and to make a few simple computations. While these may be familiar to most readers of this paper, there will be no harm in going over them briefly for the benefit of the younger men and incidentally to freshen the memories of some of the older ones, as data of this kind soon becomes hazy if not in constant use.

While the amount of moisture contained in a given space is independent of the presence of air, and depends entirely upon the temperature, it is more convenient in ventilating

work to consider the moisture as contained in the air itself rather than in the space which it occupies.

Saturation.

Air is said to be completely saturated when it contains all the water vapor it can hold without causing precipitation. If the vapor content is less than that corresponding to complete saturation, the air will tend to become saturated by absorbing moisture from surrounding objects.

Dew-Point or Temperature of Saturation.

The maximum weight of moisture which a cubic foot of air will hold varies with the temperature, and the temperature of saturation for a given weight is called the *dew-point*, because any reduction in temperature below this will produce a certain amount of condensation, which appears in the form of dew upon surrounding objects. "Steam" or moisture upon the window pane or cold walls of a room are due to the chilling of the air next to them below the dew-point or temperature of saturation, thus causing sufficient moisture to condense to bring the water content down to that corresponding to saturation at the lower temperature.

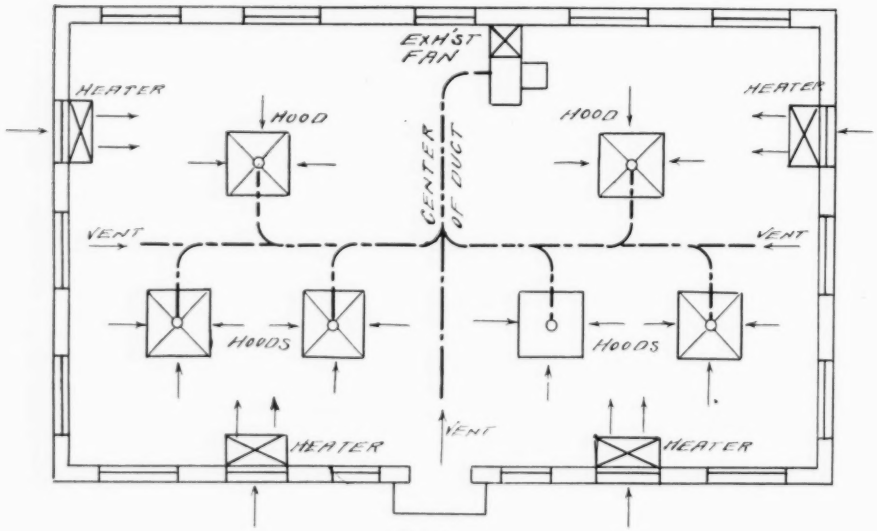


Fig. 2.

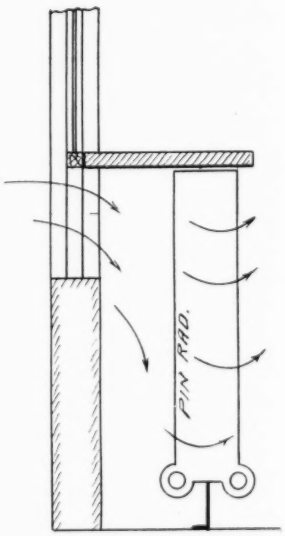


Fig. 3.

Absolute Humidity.

This represents the actual weight of moisture present and is usually expressed in grains per cubic foot of air.

Relative Humidity.

This is a term frequently met with in all problems dealing with humidity, and means the ratio of the weight of contained moisture to that which the air is capable of holding, when fully saturated at the same temperature.

For example, a cubic foot of saturated air at 30 degrees temperature contains 1.9 grains of moisture, while if heated to 70 degrees it will absorb 8 grains. Saturated air at the lower temperature has a relative humidity of $1.9 \div 1.9 = 1$, that is, it is the same as the absolute humidity.

If now, the air be heated to 70 degrees without adding moisture, the absolute humidity remains the same, while the relative humidity falls to $1.9 \div 8 = 0.238$, or 23.8 per cent.

This variation in relative humidity for a fixed amount of moisture in the air at different temperatures is taken advantage of for the removal of moisture from the types of buildings under consideration.

In the above example we have seen that saturated air at 30 degrees temperature contains 1.9 grains of moisture. Suppose on a certain day the outside temperature is 30 degrees and the relative humidity is 60 per cent, which means that each cubic foot of outside air contains $1.9 \times 0.6 = 1.14$ grains of moisture. Now if a cubic foot of this air is passed through a heating coil and its temperature raised to 70 degrees without the addition of moisture, it will be capable of absorbing $8 - 1.14 = 6.86$ grains of water before becoming saturated. In the practical application of this principle for the removal of moisture from rooms containing large volumes of steam, outside air at a comparatively low temperature and degree of humidity is heated by means of steam coils and passed through the space from which the moisture is to be removed.

Air in this condition may be likened to an immense sponge and absorbs water up to practically the point of saturation in passing through the room. That is, according to the conditions of the preceding example, each cubic foot of air delivered to the room at 70 degrees and discharged at the same temperature would carry with it 6.86 grains of moisture. In some cases the air will leave at a higher temperature than that at which it is admitted, as in laundries and paper machine rooms where the equipment gives off heat, thus increasing the power of absorption still more, while in other cases the air may be cooled somewhat by contact with cold walls and ceilings and the power of absorption reduced. In any case the working range is fixed between the outside temperature and that at which it leaves the room, and not by the temperature at which it is admitted, although the latter has an important bearing upon the temperature at discharge.

The following table gives the weight of vapor content, in pounds per cubic foot of air, for different temperatures and will be found useful in determining the carrying capacity under different conditions, as will be shown by practical examples later on:

Table I.

Air Temperature, in Deg. F.	Weight of Vapor Content per Cubic Foot at Saturation, in Pounds	Air Temperature, in Deg. F.	Weight of Vapor Content per Cubic Foot at Saturation, in Pounds
0	0.000081	75	0.00135
10	0.000125	80	0.00157
20	0.000189	85	0.00183
30	0.000273	90	0.00213
32	0.000304	95	0.00247

35	0.000340	100	0.00285
40	0.000410	105	0.00328
45	0.000492	110	0.00377
50	0.000587	115	0.00431
55	0.000700	120	0.00492
60	0.000828	125	0.00561
62	0.000885	130	0.00637
65	0.000977	135	0.00721
70	0.00115	140	0.00814
72	0.00122	145	0.00918

Example: It is desired to remove 40 gallons of water, in the form of vapor, per hour from a dye-house.

Assuming an outside temperature of 40 degrees with an average relative humidity of 60 per cent, what volume of air must be passed through the room per hour, supposing it to enter the room at 75 degrees and leave it at 65 degrees with a relative humidity of 90 per cent?

Solution: One cubic foot of saturated air at 40 degrees contains 0.00041 pounds of moisture (from Table I), or $0.00041 \times 0.6 = 0.000246$ pounds at a relative humidity of 60 per cent. One cubic foot of saturated air at 65 degrees contains 0.000977 pounds of moisture, or $0.000977 \times 0.9 = 0.0008793$ pounds at a relative humidity of 90 per cent. Hence, in passing through the room each cubic foot of air will absorb and carry off $0.0008793 - 0.000246 = 0.0006333$ pounds of moisture. The weight of water vapor to be removed is $8.3 \times 40 = 342$ pounds per hour, which will require $342 \div 0.0006333 = 540{,}000$ cubic feet of air per hour, or $540{,}000 \div 60 = 9{,}000$ cubic feet per minute.

As the outside temperature and relative humidity increase, the required volume of air will also increase and the ventilating apparatus must be designed for maximum conditions. As the outside temperature approaches 70 degrees, the normal inside temperature, the advantage due to heating the air diminishes because the total rise in temperature must be reduced in order to prevent overheating the room, and we must depend largely upon the lower relative humidity of the outside air as compared with that discharged from the room approximating saturation. Even if air is admitted at, say, 80 degrees, at a low relative humidity, in sufficient quantities to carry the vapor quickly upward so as to maintain a zone of warm and comparatively dry air in the lower part of the room conditions will be much more comfortable for the workmen than they would be at a lower temperature and a high degree of humidity.

Having considered the subject in a general way, let us now take up the rooms and buildings mentioned at the beginning of the article and describe some of the particular apparatus required in each case together with its proper arrangement to secure the best results.

Dye-Houses.

The best method of admitting and removing the air will depend somewhat upon local conditions, but in general, the greater part should be admitted near the floor at as high a temperature as possible without overheating the room, and should be removed through openings in the ceiling. This, when the air is supplied in sufficiently large volumes, carries the steam upward in its rising current and absorbs the greater part of it at an elevation above the heads of the workmen, thus maintaining a zone of fairly dry and comfortable air in the lower part of the room. While the bulk of the air supply should be furnished in this manner, it is well to admit a small amount in thin sheets at a comparatively high velocity along the ceiling, driving the steam towards the outlets and preventing condensation at this point.

Conditions will be improved and ceiling condensation reduced to a minimum by providing a shallow air space just below the outer roof and blowing sufficient warm air into this to keep the inner ceiling from becoming chilled. The volume of air required will depend upon the amount of vapor given off, which is a maximum when the dye is kept at the boiling point and the cloth passed through it from reels located above the vats. It is common practice in this country to provide for a complete change of air every two to ten minutes, according to the processes carried on in the room. In England some of the latest installations furnish a change of air once a minute, but in this country once in four minutes is about the average.

The principles involved in the ventilation of dye-houses, as described above, are illustrated diagrammatically in Fig. 1. This shows a one-story building with the fan and heater located upon the roof. The main duct is carried in the roof space and is provided with a sufficient number of openings to keep the lower ceiling warm and to prevent chilling and the resulting condensation. Down-takes upon either side of the room deliver the bulk of the warm air near the floor, while a small amount is discharged just below the ceiling and parallel with it, the jets being directed toward the center. The moist air and steam are carried off through roof ventilators carried to a sufficient height to be free of the fresh air inlet to the fan. The roof vents are insulated so as to prevent excessive chilling and condensation, as the air passes outward, while drained gutters are provided around the edges of the lower opening to prevent dripping upon those below.

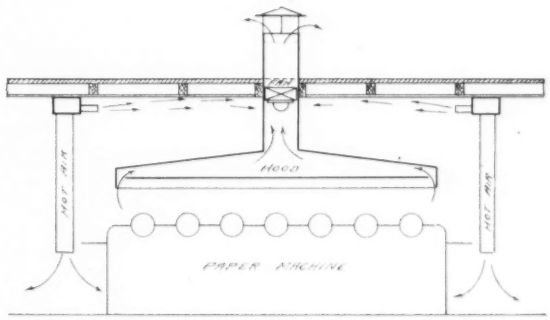


Fig. 4.

Sometimes an exhaust fan is employed in addition to the supply fan, but with the large volumes of fresh air supplied, and the comparatively high temperature, there is usually sufficient natural draft without employing mechanical means.

Different arrangements will be required in different cases, but this general principle may usually be adapted to almost any instance, which is likely to occur.

Laundries.

The ventilation of laundries has been taken up in considerable detail by the writer within the past year and will therefore only be touched upon in the present case.

Here the general principles to be followed are the same as in the dye-house just described, although the means employed for this purpose are commonly somewhat different. In this class of work it is desirable to have a strong outward draft at local points, as over washers, dryers, mangles, etc., to carry off the excessive heat and moisture at the source and so prevent their diffusion throughout the room so far as possible, thus maintaining a better air quality for the benefit of the employes. This is not possible in case of a dye-house, because steam is formed at so many different points in the room that the whole space must be treated as a single unit without any attempt to prevent its diffusion throughout the room.

In a laundry the direct sources of excessive heat and moisture are limited and comparatively few in number, and diffusion may be largely prevented by the use of hoods supplied with a strong outward draft.

(Continued on Page 313.)

LEGAL QUESTIONNAIRE

*Members of a Labor Union Have Injured My Business,—Can I Sue Them for Damages?—This Question Is Answered in a Most Careful Manner**

By "The Judge"

Members of Labor Union Liable in Damages to Firm Whose Business They Have Injured Without Justifiable Cause.

Editor, "Domestic Engineering":—A local union, members of which are employed by my firm, has seriously injured our business by sending a notice to certain firms who have done sub-contract work for us, as follows:

"A notice is here given to all union contractors, that it was voted that all union masons will not work for (naming our firm) until further notice, as said firm has been working non-union masons." (Signed by masons' union officials in the name of the union.)

We find that similar notices have been sent to other mason contractors in the vicinity who had working agreements with the union, and that they had been notified not to do work for us because all union men were to be kept away from our work.

We have never been asked to enter into any agreement with the masons' union, have never received any complaint from the union and were not notified that such a vote was proposed. When we learned of the notice we talked with the president of the union and offered to sign an agreement with the union. Later we learned that our case had been discussed by the union, at one of its meetings, and that the union refused to take any further action. We were obliged to stop taking contracts and the members of our firm are contemplating seeking work individually, as employes of some firm.

As a matter of fact we had not made it a practice to hire non-union men. The only leg the union has to stand on is that several months ago we did hire a man, not knowing that he was non-union, to do seven hours' work for us as a mason. Have we any ground upon which to bring suit against the union? R. D. H.

Answer: You have very good grounds upon which to base a suit for substantial damages against the union. The union has not only refused to do business with you, but its members have combined to prevent the contracting masons from having any business dealings with you. You have a valid claim that the union committeed a wrongful act, because of the method which it employed to accomplish its purpose, namely, the circulation of a statement which was known to be untrue and which was sent out for the purpose of preventing contracting masons from entering into contracts with you. Even assuming, for the sake of argument, that the purpose of the union was a lawful one, the means they employed to accomplish it were unlawful.

The sending out of a false statement with intent to destroy your business was malicious within the meaning of that word in a legal sense, was without legal justification, constituted an unlawful conspiracy and entitled you to substantial damages. The gist of your action, if you wish to bring one, would be the damage to your business by unlawful and malicious methods.

When such a conspiracy is shown, you have a right to look beyond the officials who actually signed and sent out the notices and recover from each member of the union who participated in the conspiracy, irrespective of the degree of his activity in the wrongful act. The jury would undoubtedly be warranted in finding that all members of the union either authorized or adopted the circulation of the untrue notice sent out, or that it was sent out in pursuance of the common purpose agreed upon by the union. Without doubt you could show that the by-laws of the union bind each member to abide by the will of the majority and that at the meeting, held after you had talked with the union officials, there was a vote to enforce and boycott against you in pursuance of the object of the association to compel the exclusive employment of union labor; and that no member of the union dissented from the use of the wrongful means employed to injure your business.

It is an elemental rule of the law that the unlawfulness of a conspiracy of the kind, practiced in your case, may be found in the end sought or the means which were used. It frequently happens, in disputes between capital and labor, that either the purpose of a strike or other disturbance of business is found to be lawful and means to be unlawful, or that the purpose of the action by the union is unlawful, although they have used methods and means which, except for the unlawful purpose, would have been perfectly proper. In either of the above cases, the party injured has a perfectly good right of action.

While there are many phases of the law which remain unsettled in the various states, some of the points have been well settled, and one of them is: That while a person must submit to competition, he has the right to be protected from malicious interference with his business. As was said in one case:

"Everyone has the right to enjoy the fruits and advantages of his own enterprise, industry, skill and credit. He has no right to be protected against competition; but he has a right to be free from malicious and wanton interference, disturbance or annoyance. If disturbance or loss comes as a result of competition, or the exercise of like rights by others, it is what is called in the law, *damnum absque injuria* (a wrong without a remedy) unless some superior right by contract or otherwise is interfered with. But if it comes from merely wanton or

*Every Effort is made to the End that these Answers may be authoritative. However, we cannot assume any Responsibility because of the very Nature of the Service, which is rendered without a personal Interview.—Editor.

malicious acts of others, without the justification of competition or the service of any interest or lawful purpose, it then stands on a different footing."

Where it is found that an injury to a man's business by a union was intentional, it becomes important to learn whether there has been a justifiable cause. The justification must be as broad as the act and must cover not only the motive and purpose, or in other words the object sought, but also the means used. If the union acts merely to protect its own interests and not to injure an employer, except in so far as the injury was the necessary result of the measures taken for the union's own interests, then the end sought may be considered legal.

"Competition is always selfish," as is stated in one case, "often sharp and sometimes deadly. The fact, that the plaintiff was vanquished, is not enough, provided that the contest was carried on within the rules allowable in such warfare. The trader is not a free lance. Fight he may, but as a soldier and not a guerilla. No man can justify an interference with another man's business through fraud or misrepresentation, nor by intimidation, obstruction or molestation."

Individual members of the association may well be held liable to you, if the court finds that the action taken by the union as a whole, was illegal, even though an individual member may have simply sat back and permitted the majority of the members to vote. As was said in the celebrated case of Lawlor vs. Loewe by the Supreme Court of the United States, if the members of a trade union paid their dues and continued to delegate authority to their officers unlawfully to interfere with the plantiff's interstate commerce business under such circumstances that the members of the union *knew or ought to have known* what was being done, and the officers were warranted in their belief that they were acting within their delegated authority, then such individual members of the union were jointly liable. Continuing, in this case, the Supreme Court said that the members of the union must have known of the acts and approved them, and must be bound to know the constitution of their association and the purpose therein declared and practised. This case, from which the above opinion is cited, was similar to your own, and the statements of the court are therefore applicable to your case.

The better view, expressed in the many cases on the subject of a man's right to trade where and when he may and with whom he may, is stated broadly, that a laborer or trader has a right to freedom from any damaging interference in his trade or calling, unless such an interference can be justified. Looking at the situation from the side of the party who does the interfering, he too, has some rights, and if, in his interference, he exercises these rights, the interference is justified.

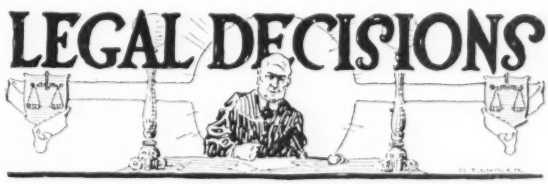
Justification of the action complained of must not be based upon too remote a benefit at some uncertain future time. For instance, interference with the business of another should not be permitted, merely because the one, who interferes honestly, believes that mankind in general, or a large part of mankind, will be benefited, either now or at some future time.

It has been repeatedly held, speaking broadly, that boycotts, in the sense of organized attempts to coerce a person or party into compliance with some demand, by combining to abstain or compel others to abstain (against their will) from having any business relations with him, are unlawful, and will be enjoined.

Where there has been an injury to your business, as in the present case, you are entitled to recover all damages resulting from the wrongful acts of the union in carrying out the common design to injure you, as, for instance, the loss sustained because of diminished business and loss of profits or increased cost of operation. Where the loss is more or less conjectural and uncertain and cannot be accurately determined, the jury may award such damages, as by competent evidence the plaintiff appears to have sustained. You can, of course, recover only for the damage to your business actually due to the fact that the union conspired to injure you.

More and more the cases on the subject of labor unions and their rights are getting away from the old idea that unless there is violence, a labor union can do about what it wishes. This former rule, that violence was necessary to give an employer a right to protection, was due, I believe, to the fact that originally a man's right to do business was not considered a property right, as it is almost everywhere today.

It would be well to find out, if you can, whether the constitution or by-laws of the union provide for action similar to that which was taken against you. It would not be necessary that the constitution or by-laws should specify in so many words for action such as took place in your case, if the purposes of the union, taken as a whole, permitted by inference, at least, the very action which was taken. If an association is formed for purposes actually innocent, and afterwards its powers are abused by those, who have control and management of its affairs, it will be criminal in those misusing their power, but the other members of the union will not be liable.



Contractor's Lien.

A contractor who has erected a building which was subject to a mortgage and vendor's lien can enforce his privilege only to the extent that, at the time of the sale, under foreclosure of such mortgage, the building enhances the value of the land, and neither the original cost of the building nor its value for the purpose for which it was erected have any necessary bearing upon that question. —New Orleans Land Co. vs. Southern States Fair. Supreme Court of Louisiana. 79 Southern 525.

Lien for Fire Extinguishing Apparatus.

A fire extinguishing sprinkler apparatus, after installation in the property of a Louisiana bankrupt, became immovable and merged with the building in which it was installed, regardless of the applicability of Louisiana statutes, and, payment not having been made, a lien may be asserted by one installing the same.—Whitney Central Trust & Savings Bank vs. United States Construction Co. United States Circuit Court of Appeals. 250 Federal 784.

Subletting.

A contractor may make a valid contract to sublet the work, although in violation of the provision of the original contract prohibiting subletting without the written consent of original contractee, after which the securing of consent is the duty of contractor and not of subcontractor.—Wallace vs. Oregon Engineering & Construction Co. Supreme Court of Oregon. 174 Pacific 156.

Buy U. S. War Savings Stamps.

QUESTIONS & ANSWERS

INFORMATION ABOUT HEATING SYSTEM TO BE INSTALLED IN CHURCH IN CANADA.

Editor "Domestic Engineering":—We send you herewith the plan of a little church, on which we have the contract for the installation of a heating system to heat the basement and the ground floor. We are also sending you a little layout of such a system, which we have made in accordance with our best knowledge.

You will note on this sketch that we have 4-inch mains on both sides of the basement ceiling, feeding ground floor and basement radiators, and returns next to them, the return for the ground floor radiators being 3 inches

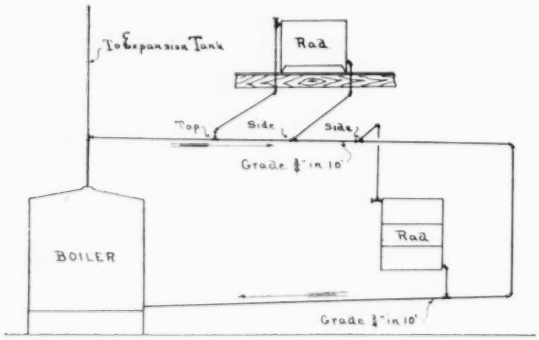


Fig. 1.

in diameter and the return for the radiators on the basement floor being 2½ inches in diameter.

The architects in charge of the building of this church do not like our layout and want us to adopt a system which eliminates a return on the ceiling, and in which the first floor radiators are fed off the top of the supply main, and the return taken into the side of the main, while the basement radiators are fed off the side of the supply main and circulate into a return pipe near the floor.

In any event, the architects desire the returns to be entirely above the floor, and that on the east side run as shown in their diagram, which we also enclose. The architects are also of the opinion that the floor of the boiler room will be low enough for this return to pass beneath the door from the kitchen into the boiler room.

The architects' diagram, just referred to, provides for one pipe only on basement ceiling to feed ground floor and basement radiators, and this pipe is also used as a return for ground floor radiators.

We understand this as an overhead system with the high point on the boiler, and we would believe in it, if we could use special distributing fittings on the branch to the radiators nearest the boiler, but, as there are none made in this size, we are afraid that the radiators at the end of the main would be too slow if we take, as they say, every feeding branch on top of mains.

If we have made ourselves clearly understood, will you please tell us, if we can adopt the layout of the architects and do as good a circulating job in that case as with our own layout.

What size of main should we use, assuming that the main and return should branch on same pipe?

If the architects' plan is safe, we would like to use it, as it would save us one pipe, which would mean a saving of money to us.

Canada. B. G. E.

We advise correspondent to use the plan of running the main and return and connecting the radiators as suggested by the architects.

In the States the one-pipe, up-feed system of hot water circulation is used almost exclusively by the Treasury and War Departments, when hot water heating apparatus is installed. The only possible variation to this is the drop connection to basement radiators, and this method is good practice.

The main should start high at the boilers (very close to the basement ceiling) and grade down in the direction of the flow—this grade or pitch being about ¾ inch in each ten feet of length. After the last radiator is connected, the main should drop as near to the basement floor as will allow of a uniform pitch (¾ inch in 10 ft.) of the same to the boiler as illustrated by Fig. 1. This sketch is intended to show the method of connecting radiators and the relative pitch of main and return on a job of this character. The expansion line should be connected from the high point as shown.

Fig. 2 is a redrawing of the sketch submitted by the

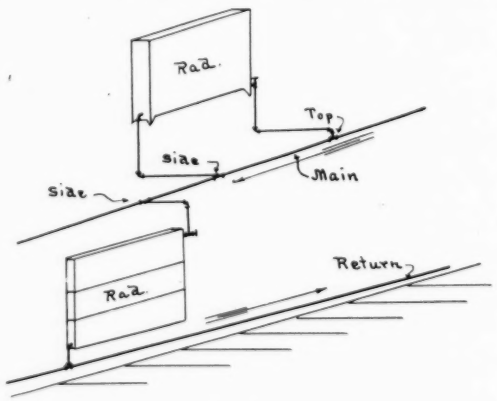


Fig. 2.

architects, showing the method of connecting the radiators suggested by them. Our only criticism of this method is this, that we believe the flow connection to radiators on the main floor should be made at the top of the radiator and the return from the bottom of the opposite end. This method of connection we have indicated on Fig. 1. This will improve the circulation by increasing the velocity.

All of the piping that can consistently be eliminated

will improve the heating system, as this will lessen the volume of water to be heated and circulated.

Considering the square feet of radiating surface, indicated on the plan submitted (which is not reproduced owing to the large amount of detail) a 4-inch circuit on either side of the building is sufficient size to easily supply the radiators.

On all single-pipe installations of hot water heating there is a loss of temperature in the main, as it extends farther and farther from the boiler. To compensate for this loss it is usual to increase the size of the radiators connected at and near the end of the main from 5 to 10 per cent, depending upon conditions, and also to slightly increase the size of radiator connections—possibly one pipe size. On the work we are considering, the mains are not of exceptional length and therefore the loss in temperature will not be very great, therefore, we believe the size of the radiator connections indicated will prove sufficient for good work.

The use of special distributing fittings would no doubt assist in dividing the circulation, but they are not required to make the job work properly.

NEW GERMAN SUBSTITUTES FOR COPPER AND BRASS.

In a review of investigations carried on by German scientists at the Kaiser Wilhelm Institute fur Kohlenforschung, the "Neue Zurcher Zeitung" says that in the metal industry further progress has been made with the production of substitutes for copper, brass and bronze, especial mention being made of the different zinc and lead alloys and the increasing importance of aluminum.

Recently there have been new developments in ore smelting. With copper schists the metallurgical possibility of going as low as 0.7 per cent has been shown, whereas formerly the average lower limit was 2.5 per cent. Operations have been commenced upon large deposits of sandstone containing white lead. Successful experiments have been made in obtaining aluminum from clay, which will, it is claimed, make Germany independent of foreign bauxite in future. With nickel ores, the workable limit has been reduced from 2.5 to 1.5 per cent. A process has also been discovered for obtaining nickel and cobalt from pit waters containing these substances.

His Wife's Voice.

If ever a man admired his wife, that man was Howler. At the party, when Mrs. Howler was asked to sing "There is a Garden in My Face," the husband glowed with pride.

It didn't matter though she had a face like a hippopotamus and a voice like an elephant. He sat beaming as she sang.

When about half way through he whispered to his neighbor:

"Don't you think my wife's got a fine voice?"

"What?" said his neighbor, who was a bit deaf.

"Don't you think my wife has got a fine voice?"

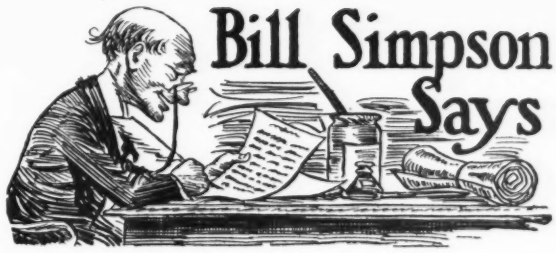
"What?"

"Don't you think my wife's got a fine voice?" roared Howler.

"Sorry," said the other, shaking his head. "That awful woman over there is making such a frightful row, I can't hear a word you say."—"New York Morning Telegraph."

Johnnie: "Papa, a man, who has a wife too many, is a bigamist, is he not?"

Papa (thoughtfully): "Not always."



(With Apologies to K. C. B.)

When I got married
* * *
My dad said to me:
* * *
"Son, don't go into debt.
* * *
Pay Cash as you go."
* * *
I only had $200,
* * *
So I had to buy a lot
* * *
Of cheap furniture
* * *
That would fill up
* * *
A kitchen, dining room,
* * *
Living room and bedroom.
* * *
I paid cash for a couple
* * *
Of years, and as I was
* * *
Always short of cash,
* * *
I always had to buy
* * *
Cheap stuff.
* * *
When my brother got married,
* * *
He went into debt to the
* * *
Extent of a thousand dollars
* * *
And bought Good Stuff.
* * *
Now, after ten years have passed,
* * *
I have to replace all of my
* * *
Cheap furniture, because
* * *
It is falling apart.
* * *
My brother's furniture
* * *
Is still good—and all paid for.
* * *
I have decided that
* * *
It is a good plan to pay Cash,
* * *
If you have enough Cash
* * *
To buy Quality.
* * *
Otherwise it is a blame
* * *
Sight better to use
* * *
Your Credit,
* * *
And Go in Debt,
* * *
And Get QUALITY.

Ilwasco, Wash.—Mudge & O'Meara is the style of firm which has just opened a plumbing business here.

The PLUMBER *and the* DRUGGIST

Why the Plumber Has Not Kept Pace With the Druggist, Whose Business With Its Profitable Sidelines Has Developed from the Old Apothecary Shop, That Sold Only Drugs

By Wallace H. Bancroft

THE train rolled into the station, an imposing structure, which had succeeded the crude wooden building with its earmarks of nearly forty years of public service.

"West Hayden!" shouted the conductor. The passengers filed out into the station and then into the street, scattering toward their respective homes.

Jim Hawley, wealthy New York broker, was returning to his home town after an absence of over twenty-five years. He stepped out from the line of passengers and went to the telephone booth in the waiting room.

He realized that West Hayden had changed remarkably. It was now a city of 80,000 population, a gain of 60,000 since the days when Jim used to sit around and talk to "Doc" Humphrey, who ran the apothecary shop, and whose profits were secured almost entirely from the sale of patent medicines and other medical accessories and the filling of prescriptions.

"Doc" was one of the bright and shining lights of the West Hayden of the early days. The big wooden mortar and pestle, which hung above the door of his place, was the symbol of his craft—a symbol which is rarely seen today in connection with the modern drug store, with its many profitable sidelines, all the natural outgrowth of the old apothecary or prescription shop.

Jim soon learned that "Doc" had branched out, until he was today the proprietor of the leading drug store in town.

There was another interesting character that Jim used to know, and that was Harry Jackson, who conducted a plumbing shop in the alley, right near the rear door of the Humphrey apothecary.

Jackson was one of the men Hawley wanted to see during his stay in West Hayden. He remembered that Jackson's shop was a curious-looking proposition with a slate hanging on the door. It was a typical example of "ye olde plumbing shop.'

Hawley remembered that Jackson was long on advising others, but short on trying out the advice stuff on himself. When there were no orders for plumbing service on the slate, Jackson used to smile and say that he had opened and closed his shop with a clean slate.

He would spend a good deal of his time in Humphrey's apothecary, where he would breathe wisdom on the vital topics of the day. Houseowners, who had to have the services of a plumber at once and who didn't care to take a chance with the slate, could usually find Jackson at the apothecary which became practically his office.

When Hawley walked into the big modern drug store, which was now being operated by "Doc" Humphrey, he was agreeably surprised. "What a contrast to the old place?" he thought.

"Doc," who was rather bald, was well up in the fifties. He was delighted to see Hawley again, and while they were reminiscing, Hawley inquired about Jackson the plumber.

"I suppose," said Hawley, "that he has also branched out and is now running a business based on the sideline principle that you and other live druggists have adopted?"

"No," replied Doc, "I'm sorry to say that Jackson has stuck faithfully in the rut. He moved out of the alley location about five years ago, and is now holding forth in a basement over on Fifth Avenue. He has progressed to the extent of doing away with that 'Leave Your Order' slate that used to hang on his shop door."

"Well, I can't understand why Jackson hasn't kept pace with you and adopted the principles of modern salesmanship. You've gotten out of the old apothecary rut of merely filling prescriptions and selling only drugs. Now you're handling cigars, magazines, stationery, fountain pens, ice cream, soap and what not. I really can't understand why it isn't just as logical for a plumber to carry sidelines as it is for a druggist to do it.

"Now Jackson was as bright as they make 'em. I remember that he used to talk very progressively about many things. He was a young man in those days and I always had it figured out that he would make good in a big way, before he handed in his checks. I expected to hear that he was operating one of the finest plumbing shops in the country, with an office, a show room and an attractive display window.

"Well I'll have to go around and see him, before I leave town, and call him down for his lack of enterprise."

Hawley Meets Jackson.

Jim Hawley called a taxi and was driven to Jackson's shop. Having descended the stairway, he opened the door and found that gentleman seated in an old swivel chair and intent upon a newspaper while his feet were resting upon the edge of a bathtub.

There was an air of melancholy and resigned sadness about Jackson as he sat there. Like some shattered lavatory bowl beyond repair, he looked as though he had gone to pieces.

When he saw Hawley, he appeared surprised and got up and greeted him with a reminiscent gleam in his eye.

"Well, for goodness sake!" he exclaimed.

"I believe you're Mr. Hawley, the successful New Yorker—formerly of Haydenville.

"Well it sure is a long time ago, since we used to loat around Doc's place and match wisdom."

"Jackson, I'm glad to see you again. You're looking fine—much finer than your business."

"My business has been sick a long time. It's suffering from the 'flu' or something of that kind," responded Jackson.

"I rather expected to find you running a whirlwind of

a plumbing business," said Hawley. "I thought you would be operating a place that would be to the local plumbing field what Doc's place is to the local drug field."

"Well, Mr. Hawley——"

"Call me Jim!" exclaimed Hawley.

"Well Jim," replied Jackson, "you see the plumbing game is rather a peculiar proposition—it's different from any other retail game. You know the opportunities for extending the principles of salesmanship are so darn limited."

"I'm not so sure about that," observed Hawley. "I realize of course that plumbing contractors have operated in one narrow groove for so long that it's difficult to cut other grooves into the main groove.

"It has struck me very forcibly that, if the old apothecary was able to get out of the groove of selling only drugs, the plumbing shop ought to be able to get out of its particular groove.

"Now I've seen plumbing shops that were rebels against the established order of things in the plumbing business. They have had the courage of their convictions, and have refused to pin their faith exclusively on estimating and installing. They have branched out—just like the apothecaries.

"Just stop and think where Doc would have been today if he hadn't put the principles of retail selling into his business. Why he would still be fooling around with prescriptions and handling a few odds and ends in the drug line.

"He hasn't got away from the first principles of the apothecary. He still handles prescriptions and drugs, but these things only represent one angle of his business. You walk into his store, and what do you find? Why you find a place based on the department store idea. You find that he is handling a lot of things that are not directly related to the drug game. All of these things, such as cigars, candy, stationery, soap, ice cream, razors, fountain pens, and a lot of other things, are available for purchase. And they all help to increase profit, and that's what we're all in business for.

The Sideline as a Life Saver.

"The sidelines that the modern drug store handles are life savers. In communities where the health average is very high, where little sickness prevails, the druggist would practically starve, if he depended upon the profits from the sale of drugs. Sidelines are, therefore, highly desirable when considered in terms of dollars and cents.

"Now the plumber should be wise enough to see the light just as the druggist has seen it. The plumber complains of hard times and the fact that people are not in the market for new plumbing fixtures, and that very little repair work is being done. The druggist has prepared himself, fortified himself against the possibility of being unable to sell a sufficient amount of drugs to make his business profitable. He has put in enough sidelines to make up for the lack of sufficient profit from the sale of drugs. Now, couldn't the plumber do likewise?

"Jackson, it seems to me that the average plumber is a great stickler for tradition. He has hewed too closely to

"I should recommend that, if possible, you get a partner, some young fellow, with a little capital to invest and plenty of selling ideas."

the line. He has followed too closely in the foosteps of his predecessors, hesitating to get away from the beaten track.

"The druggist has cast tradition and precedent to the winds. He has had the courage and initiative to rise above the status of being merely a prescription filler."

Jackson Takes a Partner.

"Well, now Hawley," began Jackson, "how would you advise me to go about this proposition of expanding my business?"

"I should recommend that you get a partner, if possible, some live, young fellow with a little capital to invest and plenty of selling ideas."

"I have such a man in mind," said Jackson. "He's a fellow who has recently been given a master's certificate by the Board of Examiners of Plumbers. He has been anxious to join hands with me."

"Well, now Jackson," advised Hawley, "you just grab hold of him. You're getting on in years, and while you're not an old man, you're certainly not a young man."

"This prospective partner," continued Jackson, "is now running a small shop based on the drug store selling idea. He believes that it would pay the modern plumber to follow in the footsteps of the druggist."

Hawley suddenly drew out his watch. "Goodness me, Jackson, I really must be going. I've got to catch a train at 1:30 p. m. Good by, Jackson, old man. Take care of yourself and your business, too."

"Your discussion on the subject of the plumber and the druggist has really been instructive," said Jackson, as he grasped Hawley's hand.

"I'm going to get in touch with that prospective partner and together we'll follow in the foosteps of the druggist."

"You just go right to it," advised Hawley as he departed.

November 25, 26 and 27, 1918.—The annual convention of the National Housing Association, at Boston, Mass.

December 6 and 7, 1918.—Convention of the National Federation of Building Industries, in Atlantic City, N. J., with headquarters at Hotel Traymore.

December 11 and 12, 1918.—The regular quarterly meeting of the National Association of Brass Manufacturers, in New York City.

January 14, 15 and 16, 1919.—The annual convention of Iowa Master Plumbers' Association, at Cedar Rapids, Iowa.

The Heating and Piping Contractors' New York Associations.

The Master Steam and Hot Water Fitters' Association of the State of New York will hereafter be known as the Heating and Piping Contractors' New York State Association, Inc., according to official announcement issued from the association's headquarters at 50 Union Square, East, New York City.

The Master Steam and Hot Water Fitters' Association of New York City has also changed its name and will hereafter be known as the Heating and Piping Contractors' New York City Association. This association also maintains headquarters at 50 Union Square, East, New York City.

The National Conference on Housing in America.

A number of prominent speakers have been secured for the seventh annual National Conference on Housing in America which is to be held at the Copley Plaza Hotel, Boston, Mass., on November 25th, 26th and 27th. Included in the list are Samuel Gompers, president of the American Federation of Labor; Charles M. Schwab, director of the Emergency Fleet Corporation; Thomas Adams, town planning adviser to the commission on conservation, of Canada; Joseph D. Leland, vice-president of the United States Housing Corporation, and several others.

Jessie Boscacci.

Jessie Boscacci, a member of the plumbing firm of P. M. Boscacci & Sons in Stockton, Cal., died recently at his home in that city.

Robert McPherson.

Robert McPherson, secretary and treasurer of the W. G. McPherson Co., heating contractors in Portland, Ore., died recently at his home in that city.

Frank Michelbach.

Frank Michelbach, a well-known master plumber, at 411 Poplar Street in Philadelphia, Pa., died at his home in that city, last week. He had been a member of the Master Plumbers' Association for a number of years.

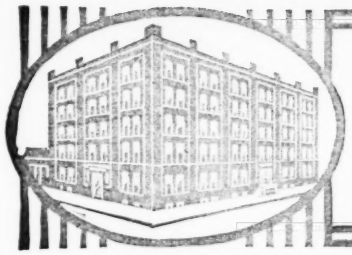
James J. Kennedy.

James J. Kennedy, of the plumbing firm of Stinson-Kennedy Co., of Pittsburgh, Pa., died on Monday, November 11th, at his home, at Brightwood. Mr. Kennedy was born in England in 1849, and came to Cincinnati in 1872. Later he went to Pittsburgh, where he began working for the Jarvis-Halpin Co. A short time afterward he became a partner in the firm and the firm name was changed to Halpin-Kennedy Co. At the time of Mr. Halpin's death the name was changed to the present one. Mr. Kennedy recently moved from Grandview Avenue, Mt. Washington, where he had lived about 45 years. He was a director of the South Hills Trust Co., and one of the organizers of Castle Shannon Branch No. 47 of the Catholic Beneficial Society. His wife, five sons and three daughters, survive him.

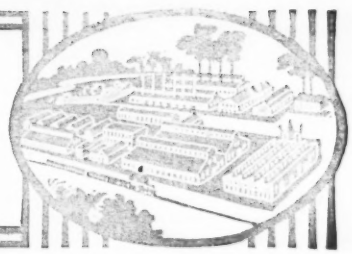
LOW PROFITS IN GERMAN IRON.

At a recent general meeting of the Haspe Iron Works, of Germany, the president, Herr Klockner, stated that the war profits of the German iron companies had fallen below the maximum, says "The Daily Metal Reporter." The gross profits of the Haspe Iron Works in 1917 were less by 2,000,000 marks than in 1916, and no better prospects could be held out for the current year. Producing costs were increasing from month to month and the military controlling offices persistently refused to increase the selling prices.

Herr Klockner expressed himself as strongly opposed to stringent government control of trade in the transition period after the declaration of peace. The creation of a monopoly of exports would be a mistake, Germany must have a large export trade to the East after the war, because without it there would not be sufficient employment when the war requirements ceased.



Among the Wholesalers and Manufacturers



CENTRAL SUPPLY ASSOCIATION'S TWENTY-FOURTH ANNUAL MEETING.

The twenty-fourth annual meeting of the Central Supply Association, held on November 20th, at the Hotel Sherman, Chicago, was well attended, particularly for a deferred convention.

It was realized by all, that the past two weeks had brought such momentous changes that instead of a war convention, the deliberations and topics were along the lines of a reconstruction program and the return to non-war industry.

Among the telegrams and letters presented was one from Joseph F. Evans, president of the Eastern Supply Association, conveying greetings and good wishes; another from Alex B. Pierce, vice-president of the N. O. Nelson Manufacturing Co., St. Louis. Word also came from Charles K. Foster, of the War Industries Board, Washington, regretting his inability to be present, due to uncertain conditions in Washington.

The word arousing the greatest enthusiasm was from Andrew Wheeler, chief of Bureau of Warehouse Distribution, dated November 18th, and reading as follows:

"Effective at once, all restrictions on sales and purchases by jobbers are hereby abolished. Warehouse prices, however, must be maintained. No reports of sales are required. Material may be sold by jobbers for any purpose whatever."

The following concerns were elected to membership: Chicago Nipple Manufacturing Co., Chicago; Chicago Pottery Co., Chicago.

The report formulated by the Publicity Committee of the Trade Extension Committee, was considered, together with the resolutions as adopted at the meeting of member delegates on September 5, 1918, in which it was recommended that the educational campaign be continued, and on the basis of recommendations of the Finance Committee, the Central Supply Association unanimously voted to contribute its pro rata in putting this into effect.

In reference to the recommendations made to the manufacturers of soil pipe and fittings by the Conservation Division of the War Industries Board, while it was the general opinion that this was primarily a war measure, nevertheless, there were embodied in such order, features entirely contrary to established custom and sanitary engineering, which should not be overlooked. By the vote of the convention, this subject was referred to the National Committee, coupled with the further recommendation that only one weight of soil pipe and soil pipe fittings be manufactured. The National Committee were further requested to continue to develop the work of standardization and elimination of the vast number of unnecessary sizes, weights and design of sanitary supplies.

In reference to the meeting called by the National Federation of Building Industries at Atlantic City on December 6th and 7th, the action of the National Committee in affiliating with this movement in behalf of itself and the Supply Associations was heartily approved.

The meeting called by the Chamber of Commerce of the United States for Atlantic City on December 4th, 5th and 6th, to be particularly devoted to the all important subject of reconstruction, the War Service Committee of the Central Supply Association was authorized to represent the association at this conference.

The association unanimously approved the recommendation of the Carbon Club, looking to the standardization of ball cocks and ball cock shanks and threads. In fact, the whole meeting voiced the very unanimous feeling that whatever has been gained during the period of the war through the conservation and standardization bureaus of the War Industries Board should be both held and extended.

The secretary, in his report, advised the members that Great Britain has had 140 committees working on different problems of reconstruction, while our own country has had practically none. On the other side of the water, the Imperial Association of Commerce and the British Board of Trade are giving much attention to the general proposition to resist the state control of business and that there should be no attempt at government control of industry and trade after the war, except, in-so-far, as such control may be necessary during the transition from a war to a peace basis.

Resolutions were adopted on the death of William Albert Myler, and also the sympathy of the convention was expressed to the Richardson & Boynton Co. on the death of its president, Henry T. Richardson. Likewise, to W. C. LaTourette, of the Cedar Rapids Pump Co., on the death of his son, George LaTourette.

An informal address was given by E. I. Leighton, of the Leighton Supply Co., Fort Dodge, Iowa, on "How to Get Money" and dealing with the shortening of terms. In this connection, a report was made on a questionnaire, submitted on this subject a month since.

Election of Officers.

The following officers and executive committee were elected for the ensuing year:

President, J. R. Steneck; first vice-president, C. V. Kellogg; second vice-president, A. Y. McDonald; treasurer, Edw. F. Niedecken; secretary, Paul Blatchford.

Executive Committee: J. R. Steneck, C. V. Kellogg, A. Y. McDonald, Edw. F. Niedecken, P. J. Frey, J. D. Tschopik, E. I. Leighton, F. D. Keeler, George Laib.

National Committee: Geo. H. Gorton, Martin J. O'Fallon, Albert A. Merkel, Clarence V. Kellogg, John Walker.

Delegates of the Chamber of Commerce of the U. S. of A.: Theodore Ahrens and George H. Bailey.

Talks and discussions were given by many of the members, among them: William M. Byrd, Jr., W. E. Manning, George H. Bailey, William Heap, George D. McIlvaine, of Pittsburgh; Edw. E. Niedecken, C. V. Kellogg, and other manufacturers and jobbers.

Members in Attendance.

The following members were represented, as indicated; where no name is given, representation was by proxy:

Akron, Ohio.—The Hardware & Supply Co., W. W. Sharp.
Algoma, Wis.—Plumbers' Woodwork Co., S. H. Newman.
Anderson, Ind.—May Supply Co., I. E. May.
Atlanta, Ga.—General Supply Co. and Lowry Co.
Barberton, Ohio.—Pittsburgh Valve & Fittings Co., F. S. Crumley.
Birmingham, Ala.—Jefferson Plumbers' & Mill Supply Co.
Bloomington, Ill.—Keiser-Van Leer Co., B. C. Van Leer.
Buffalo, N. Y.—W. A. Case & Son Mfg. Co., C. W. Fell.
Burlington, Wis.—Burlington Brass Works.
Bushnell, Ill.—Bushnell Pump Co.
Cedar Rapids, Iowa.—Cedar Rapids Pump Co.; Chandler Pump Co., Wm. H. Dunshee; Dearborn Brass Co.
Chattanooga, Tenn.—The Cahill Iron Works, F. H. Caldwell.
Chicago, Ill.—W. D. Allen Mfg. Co., W. C. Donlevy; American Radiator Co., R. B. Flershem; A. M. Byers Co., Cephas Taylor, Jr.; Chicago Pottery Co., L. A. Perry; Chicago Tube & Iron Co., W. W. Orrison, E. E. Peter, H. W. Haigh and C. A. Arthur; Crane Co., C. D. Little; Davies Supply Co., Eugene Buehler; S. Deschauer Co., O. J. Deschauer; Federal-Huber Co., A. F. Johnson; Findeisen & Kropf Mfg. Co., Geo. I. Blowers; Goulds Mfg. Co., Robert E. Hall; Hammond-Byrd Iron Co., Wm. M. Byrd, Jr.; Henion & Hubbell, R. C. Mead; Hoelscher Bros., Ed C. Hoelscher; Hoffman Specialty Co., A. S. Lindeblad; Illinois Malleable Iron Co., J. R. Steneck and John J. Leahy; International Heater Co., D. E. McCabe; Jones & Laughlin Steel Co., S. E. Hackett and M. A. Blessing; Kellogg-Mackay Co., C. V. Kellogg and R. E. Bidwell; La Belle Iron Works, Wilmer Wickersham; Mark Mfg. Co., Frank F. Corby, C. V. Larson and W. E. Corby; Monash-Younker Co., L. M. Berwin; John C. Moninger Co., W. M. Rupp; National Plbg. & Heating Supply Co., E. C. Garrity; The Nye Tool & Machine Works, H. G. Nye; H. S. Raymond, by L. R. Phillips and R. J. McAuliffe; Richardson & Boynton Co., G. E. Murch; J. J. Ryan & Co., J. A. McCormick; Spang, Chalfant & Co., W. M. Thompson; Standard Sanitary Mfg. Co., L. B. Fulton; Street & Kent Mfg. Co., C. D. Street; C. C. Todd, by C. C. Todd; United States Radiator Corporation, H. N. Booth; Walworth Mfg. Co., Francis Worcester; Weil Bros., I. Weil; Weir & Craig Mfg. Co., James Weir; Western Plumbing Supply Co., J. Caul; Whitney & Ford, Chas. A. Ford; S. Wilks Mfg. Co., E. W. Sedgwick.
Cincinnati, Ohio.—John Douglas Co.; Lunkenheimer Co., D. J. Cahill; Merkel Bros. Co. and Murdock Mfg. & Supply Co.
Cleveland, Ohio.—The A. D. Dennison Co., A. D. Dennison; Kennedy Company; Monarch Brass Co.; H. S. Rivitz & Co., I. Weil; The Walker Supply Co.
Columbus, Ohio.—Columbus Supply Co., Scioto Valley Supply Co.
Decatur, Ill.—Leader Iron Works, C. B. Irish.
Denver, Colo.—Hedges-Atkins Supply Co.
Des Moines, Iowa.—Globe Machinery & Supply Co., F. W. Swanson; L. H. Kurtz Co., B. Waldt.
Detroit, Mich.—Commonwealth Brass Corporation, E. W. Sanborn and N. A. Henwood; Detroit Lubricator Co., S. A. Witt; Detroit Range Boiler Co., E. W. Stoddard; Detroit Valve & Fittings and Detroit Brass Works, L. W. Tilden; A. Harvey Sons Mfg. Co., Ltd.; Kimball-Eisenberg Co., McRae & Roberts Co.; Michigan Plumbing Supply Co., Edw. E. Klein; Penberthy Injector Co.; Murray W. Sales & Co.; Sterling & Skinner Mfg. Co., R. R. Sterling; Walker Mfg. & Supply Co.
Dubuque, Iowa.—Kretschmer Mfg. Co., Fred N. Kretschmer; A. Y. McDonald Mfg. Co., Ira G. Whitney; Morrison Bros., A. M. Morrison.
Eau Claire, Wis.—W. H. Hobbs Supply Co., W. H. Hobbs.
Evansville, Ind.—Never-Split Seat Co.
Fort Dodge, Iowa.—Leighton Supply Co., E. I. Leighton.
Fort Wayne, Ind.—The P. & H. Supply Co., C. J. Stier.
Grand Haven, Mich.—William Heap & Sons, Wm. Heap.
Grand Rapids, Mich.—Ferguson Supply Co., Ltd.; Wolverine Brass Works.
Green Bay, Wis.—Murphy Supply Co., W. C. Noble.
Greenville, Ohio.—Ross Supply Co., Geo. F. Taylor.
Houston, Texas.—Keithly Co.
Indianapolis, Ind.—Central Supply Co.
Joplin, Mo.—Plumbers' Supply Co.
Kalamazoo, Mich.—Bond Supply Co., Fred J. Bond; Kalamazoo Sanitary Mfg. Co., E. V. Brigham.
Kansas City, Mo.—Kansas City Pump Co.; Southwest Plumbing Supply Co., G. H. Gorton; U. S. Water & Steam Supply Co.; W. B. Young Supply Co., Geo. H. Gorton.
Kenosha, Wis.—Frost Mfg. Co., J. W. Palmer.
Kewanee, Ill.—Kewanee Boiler Co., H. E. Pursell and J. P. Dugger.
Kohler, Wis.—Kohler Co., J. B. Murphy.
La Crosse, Wis.—W. A. Roosevelt Co., F. F. Flock.
Lafayette, Ind.—Biggs Pump Co., F. B. Timberlake.
Lincoln, Nebr.—Cornell-Searl Co.
Louisville, Ky.—Laib Co., Geo. H. Laib; Standard Sanitary Mfg. Co., J. W. Oliver.
Mannington, W. Va.—Bowers Pottery Co.
Mansfield, Ohio.—The Barnes Mfg. Co., F. R. Barnes; Hughes Supply Co.; Humphryes Mfg. Co., Fred L. Jones; Ohio Brass Co., W. T. Jameson.
Marietta, Ohio.—Becker Manufacturing
Marshalltown, Iowa.—The Fisher Supply Co., L. C. Pensinger.
Mason City, Iowa.—Hawkeye Supply Co., G. B. Pray.
Milwaukee, Wis.—F. R. Dengel Mfg. Co., Wm. E. Gerstenberg; Hoffmann Mfg. Co., August L. Seelman; Hoffmann & Billings Mfg. Co., E. F. Niedecken; Robert Rom Co.; United Pump & Power Co., W. H. Parker and P. C. McNulty, Jr.; Windsor Mfg. Co.; Wisconsin Plumbing & Heating Supply Co., Wm. G. Schrubb.
Minneapolis, Minn.—Central Supply Co., P. J. Frey; The D. M. Gilmore Co., J. R. Gilmore.
Muncie, Ind.—Geo. Keiser & Co.
Newark, Ohio.—The Universal Supply Co., R. Clay VanVoorhes.
New Orleans, La.—Manion & Co.; Plumbing & Mill Supply Co., Inc., H. J. Veith.
New York, N. Y.—C. C. Todd.
Omaha, Nebr.—Omaha Sanitary Supply Co.; United States Supply Co., J. B. Rahm.
Peoria, Ill.—Ideal Tank & Supply Co., D. P. Toberty; Kinsey & Mahler Co.
Phoenix, Ariz.—J. H. Mulrein Plumbing Supply Co.
Pittsburgh, Pa.—Bailey-Farrell Mfg. Co., Geo. H. Bailey; Bowman Supply & Mfg. Co., Inc.; Iron City Sanitary Mfg. Co., C. F. Meyer; Jones & Laughlin Steel Co., F. D. Grunder; Republic Iron & Steel Co., T. S. Parsons, A. E. Walker and D. J. Geary; Wm. B. Scaife & Sons Co., F. W. Peters; Standard Sanitary Mfg. Co., S. H. Moon and J. D. Tschopik; United States Sanitary Mfg. Co., A. B. Cline, Jr., and Frank C. Newton.
Portsmouth, Ohio.—The Standard Supply Co.
Quincy, Ill.—E. Best Plumbing & Heating Supply Co., A. L. Best; Modern Iron Works, Chas. W. Badger.
Rockford, Ill.—Rockford Brass Works, F. D. Keeler.
Salem, Ohio.—National Sanitary Mfg. Co., Geo. M. Snyder.
Salt Lake City, Utah.—Joseph Nelson Supply Co.
Sioux Falls, S. D.—Plumbing Supply Co., Chas. D. Symms.
Springfield, Mo.—Harry Cooper Supply Co., W. W. Carnagey, Jr.
St. Joseph, Mo.—The Bristol Co.
St. Louis, Mo.—American Foundry & Mfg. Co., J. C. Sanders; John C. Kupferle Foundry Co., W. C. Ehrhardt; Monument Plumbing Supply Co., S. L. Hillebert; N. O. Nelson Mfg. Co., L. D. Lawnin; Standard Sanitary Mfg. Co., C. H. Porter.
St. Paul, Minn.—Cochran-Sargent Co., H. H. Sargent; Union Brass & Metal Mfg. Co., P. J. Frey; Western Supply Co., J. L. Sullwold.
Sturgis, Mich.—Morency-Van Buren Mfg. Co., R. H. Van Buren.
Tampa, Fla.—Coates Plumbing Supply Co.
Toledo, Ohio.—American Plumbers' Supply Co., H. A. Schlingman and F. W. Terwilliger; National Supply Co., J. M. Stoddard; Ohio Plumbers' Supply Co.
Trenton, N. J.—American Sanitary Works, B. O. Tilden.
Union City, Ind.—Knapp Supply Co.
Wabash, Ind.—Honeywell Heating Specialty Co.
Watertown, N. Y.—J. B. Wise, Inc., E. W. Sanborn.
Waukegan, Ill.—Northern Brass Mfg. Co., C. S. Johnson and R. R. Schultz.
Wheeling, W. Va.—Trimble & Lutz Supply Co.; Wheeling Sanitary Manufacturing Co., F. W. Wheelock; Wheeling Steel & Iron Co., L. C. La Fleur.
Youngstown, Ohio.—Youngstown Sheet & Tube Co., W. E. Watson, W. E. Manning, G. W. Christopher and F. A. Lathrop.

Guests in Attendance.

The following guests were at the meeting:

Chicago, Ill.—Sloan Valve Co., R. M. Nelson and W. E. Sloan.
Conshohocken, Pa.—John Wood Mfg. Co., Earl D. Freas and Frank Sutcliffe.
Minneapolis, Minn.—Central Western Credit Association, J. Z. Young.
New York, N. Y.—A. A. Ainsworth.
Pittsburgh, Pa.—National Pipe & Supplies' Association, Geo. D. McIlvaine.
Trenton, N. J.—Monument Pottery Co., F. K. Dibley; Thos. Maddocks' Sons Co., F. F. Bulkeley.

HENRY T. RICHARDSON CALLED BY DEATH.

Henry T. Richardson, president of the Richardson & Boynton Co., of New York City, died at his home in that city on Sunday, November 17th, after several weeks' illness in his 74th year. Mr. Richardson was the son of the founder of this concern and he had been connected with the business for over 50 years.

DALTON-INGERSOLL MFG. CO. IN NEW LOCATION.

The Dalton-Ingersoll Mfg. Co., of Boston, Mass., has just moved its headquarters from 52 Chauncey Street to Fort Hill Square, in the heart of the supply house district.

MIKESELL BROS. CO.'S OFFICES MOVED.

Mikesell Bros. Co., of Chicago, has just moved its offices from 176-178 North La Salle Street, to the Metropolitan Building, Randolph and La Salle Streets. The company retains its floor space at the former location for warehouse purposes.

MASSACHUSETTS SANITARY CLUB'S FIRST GENERAL MEETING AND DINNER.

Tuesday, November 12th, was a big day in Massachusetts. By proclamation of the governor, business was suspended and the day was observed as a holiday. All day long the people of the state celebrated in honor of the good news that had come from "Over There" the day before.

It so happened that long before even the most optimistic had anticipated that the end of the Great War was so near, the officers of the new Massachusetts Sanitary Club had selected November 12th as the date for the first general meeting and dinner of the organization, and so the 200 or more master plumbers, manufacturers and plumbing supply jobbers, who gathered about the tables at the luxurious City Club in Boston, were enabled to make the event one of double significance—an opportunity to express their feelings of joy and gladness at the successful conclusion of the struggle, in which many of their sons had been taking an active part; and an opportunity for a heart-to-heart discussion between the men, who manufacture and sell plumbing goods, and those who install them, on the question which is admittedly of the highest importance to all, how to prepare for the future, for after-the-war conditions.

All of the trade speakers were agreed—and they represented all angles of the plumbing business—that the best answer to the question is to be found in the single word "Co-operation." It is to find ways and means to bring about this necessary co-operation that the Massachusetts Sanitary Club was organized a few months ago As the first step the membership roll was opened to both master plumbers and jobbers and the following declaration of principles was ordered printed on the literature of the organization:

"The objects of the club are to promote social intercourse among members, to foster trade and commerce in plumbing, heating and kindred lines of business, to procure uniformity and certainty in customs and usages of these trades, to diffuse reliable and accurate information on trade matters, and to improve the condition of the industry in every lawful manner."

The officers of the organization, who represent both jobbers and plumbers, are: President, Daniel F. Carroll, of Lowell, president of the State Association of Master Plumbers; vice-president, William H. Toner, of Worcester, master plumber; treasurer, J. Preston Perham, of Boston, master plumber; secretary, H. W. Thorndike, of the F. W. Webb Mfg. Co., Boston, jobbers in plumbing supplies. Directors: Willam A. Bradford, Quincy, master plumber; William P. Kane, Boston, master plumber; Frank W. Hubbard, of W. B. Hubbard & Sons, of Boston, jobbers in plumbing supplies; George E. Ryan, Lynn, master plumber; and R. D. A. Thompson, of the Thompson-Durkee Co., jobbers in plumbing supplies, Boston.

The dinner itself, which was one of the important features of the program, occupied more than an hour. Between courses Ralph N. Brown, an army chorus leader taught the company to sing the army songs. The men joined with a vim and made the hall resound with their outbursts of melody.

In opening the post-prandial exercises, President Carroll outlined the objects of the club and declared that it ought to prove of great benefit to master plumbers and jobbers alike. He explained that members of the State Association of Master Plumbers and one representative from each plumbing supply house were eligible to membership, and he invited such persons in the company to make application on forms which had been printed in the song book. Later in the evening the applications were collected, and it was found that 96 names had been added to the membership roll.

The first speaker, introduced by Mr. Carroll, was Dr. William Reid, whose Y. M. C. A. uniform bore two gold stripes, indicating a full year's service with the forces abroad. He told of the work among the boys, of their heroism and devotion to the country and their memories of home, and declared that the American army was the cleanest, most wholesome and most sanitary body of men that could be found on the fighting fronts. Dr. Reid, in his 5,000 miles of travel in France, visited practically every part of the country from the front line trenches to the debarkation ports where the stream of American soldiers was constantly flowing into the country, and he had many interesting anecdotes to tell, which were listened to with particular interest by the scores of men in the company who wore the little red and gold service pin on their coat lapel.

James S. Cassedy, of Cambridge, member of the board of directors of the National Association of Master Plumbers and past national president, before settling down to the formal business discussion also gave some interesting sidelights on the war. Coming down to business conditions, Mr. Cassedy declared that the job of the plumber now that the war had ceased, was, first, "to preserve our own business and make our own living," and next "to be prepared and to do our share in the work of reconstruction." He declared that business in building lines was paralyzed, and he pointed out how the Trade Extension movement opened up the possibility of developing work to keep the master plumbers busy until conditions improve. He saw no reason why plumbing might not be sold from house to house the same as talking machines, pianos and similar articles. The plumber should be a salesman and show owners where they could improve their property, that their fixtures were out of date and should be replaced. Many people have been making big money from war work and this he thought was the plumber's opportunity. He declared any man in the audi-

ence could go out and ring door bells in Boston and in a week sell $10,000 worth of plumbing, if they would only make up their minds to do it and not wait for business to come to them.

The speaker urged that master plumbers plan to take care of returning journeymen who gave up their positions to take up arms. He declared that they should be given the preference, and if there was any loafing to be done, it should be by those who remained at home and enjoyed the high wages. He suggested that it might be well if this matter could be taken up with union officials.

Theodore Ahrens, of Pittsburgh, president of the Standard Sanitary Manufacturing Company, said that such co-operation as the Sanitary Club was urging was something that was needed throughout the country, and he congratulated the Boston men on being the pioneers in this movement. He declared business men would have to re-adjust their ideals and adopt new methods because of the war. The same law which forced nations to co-operate to overcome the common enemy should apply to industry. The manufacturer, said Mr. Ahrens, needs the jobber for distribution; the master plumber needs the jobber to insure him supplies at any time; and both the manufacturer and the jobber need the master plumber as the final distributor.

Outlining subjects on which the manufacturer, the jobber and the master plumber might co-operate, the speaker declared that the Trade Extension movement meant much to all; that all might profitably work together to promote the more extensive sale and use of plumbing goods among the farmers who in the past had been left largely to the catalogue houses; and that they might co-operate to improve the standard of the men in the business, to discourage dishonest dealers and plumbers and to encourage the honest and upright and fair dealing man.

Mr. Ahrens thought master plumbers should be merchants as well as contractors, that they might properly sell anything they had in their shop to anyone who had the money to pay for it, whether they were engaged to make the installation or not. He had found that men who took this position and did not insist that they must be hired to install everything sold usually got the job anyway. He also suggested as further means of co-operation joint action to see that proper sanitary laws are made and enforced and the establishment of uniform credit systems. He thought that the manufacturer and jobber should give the master plumber the benefit of their trained staffs to help in making sales. He believed something must be done to improve the financial condition of the master plumbers, and he thought that the Massachusetts master plumbers had taken a step in the right direction.

George D. McIlvaine, of Pittsburgh, secretary of the National Pipe & Supplies Association, and also secretary of the National Association of Secretaries of Business Organizations, declared this was an era of co-operation. The day of unbridled, reckless competition is doomed. One of the mose beneficial results of the war, he said, was the changed attitude of the Government on this very question of business co-operation, or business organization. Many lines of business he said were today operating with Government encouragement and Government sanction. Authorities in Washington were learning that business associations were not organized to circumvent the law or get undue profits but were organized oftentimes in self-defense. He believed the situation developing from the war would make it apparent that sanction should be given to co-operative agreements among competitors, doing an inter-state business, and that with a better appreciation of the results of co-operative effort much good would result.

"If ever there was a time in the history of American business that required co-operation," declared Mr. McIlvaine, "now is that time. Regardless of what happens, be it boom or depression, the need of co-operation will be more necessary than ever." It is not good business, the speaker believed to crush a competitor; it is better to conserve a known quantity than to encourage an unknown quantity. Co-operation should start on the basis that the other man is as sincere as you, and it will pay well, not only in dollars and cents, but in personal satisfaction as well.

David Craig, secretary of the State Board of Examiners of plumbers and former national president, spoke from the floor in response to an invitation of the chairman. He declared that the master plumbers had always been ready to co-operate with the manufacturer and the jobber. He declared that if the manufacturer and the jobber would get their plan down to concrete terms and get away from generalities, they would find the master plumbers ready and willing to co-operate.

Frank B. Lassette, of New York, vice-president of the National Association of Master Plumbers, who had been expected to be a speaker, was unable to attend because of illness, and Dr. Eugene R. Kelley, state commissioner of health, and Professor George C. Whipple, of Harvard, likewise were not able to be present.

The list of "those present" was made up of master plumbers from all sections of Massachusetts, including officers of the state and many local associations, and representatives of practically every plumbing supply house in Boston. The officers of the club were much pleased with the large attendance and the interest expressed by many in the organization, and declared they were satisfied the club would fill a long standing gap, and that there would be other equally interesting and instructive gatherings in the future.

BUILDING PERMITS FOR OCTOBER.

The darkest hour comes just before the dawn. The total value of building permits issued for private construction work in 142 cities throughout the United States in October was less than for any month during the past six years. The nearest approach to this low-water mark was in January, 1918, when the returns from 110 cities showed a total of only $400,000 greater value.

Official Reports from 142 Cities.

The total value of these building permits, issued in 142 principal cities throughout the United States, as officially reported to the American Contractor, for October, 1918, was $26,279,711, as compared with $43,244,788 in October, 1917, a decrease of 39 per cent. The following table gives an interesting comparison of construction work in October for the past five years.

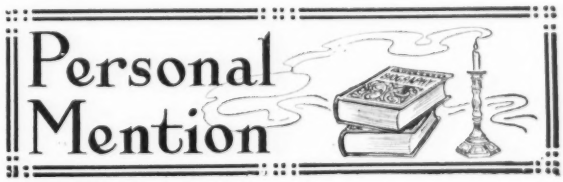
	Number of Cities Reported	Estimated Value of Buildings
1918	142	$26,000,000
1917	142	43,000,000
1916	111	99,000,000
1915	111	78,000,000
1914	73	44,000,000

The recent ban on buildings which went into effect during September was fully operative during only one entire month, namely, October. It is obvious that once the Government decided to eliminate private construction work, the measures it took to do so were very effective.

Gains are shown in 26 of the 142 cities listed, but these are only significant as indicating centers of war activities.

City	October, 1918 Estimated cost	October, 1917 Estimated cost	Pct. Loss
Akron, Ohio	$ 158,210	$ 673,255	76
Albany, N. Y.	105,630	174,120	32
Allentown, Pa.	34,685	77,725	55
Altoona, Pa.	11,160	7,651	*46
Atlanta, Ga.	90,099	238,606	62
Atlantic City, N. J.	18,453	124,113	85
Auburn, N. Y.	20,475	5,625	*264
Augusta, Ga.	36,617	32,814	*12
Baltimore, Md.	215,307	729,281	70
Bay City, Mich.	38,705	9,450	*310
Bayonne, N. J.	9,760	69,300	85
Berkeley, Cal.	182,338	91,000	*100
Binghampton, N. Y.	22,294	243,867	90
Birmingham, Ala.	89,246	148,677	35
Boston, Mass.	448,448	528,511	15
Bridgeport, Conn.	92,444	208,315	55
Brockton, Mass.	16,870	57,323	70
Buffalo, N. Y.	328,000	1,014,000	67
Camden, N. J.	2,643,445	206,175	*1182
Canton, Ohio	91,380	129,075	29
Cedar Rapids, Ia.	18,000	241,000	92
Charleston, S. C.	27,948		
Chattanooga, Tenn.	14,932	108,721	86
Chelsea, Mass.	7,585	69,878	89
Chicago, Ill.	1,312,200	2,756,700	52
Cincinnati, Ohio	331,775	572,695	42
Cleveland, Ohio	908,080	2,091,630	56
Colorado Springs, Colo.	5,220	35,425	85
Columbus, Ohio	215,855	287,835	25
Dallas, Texas	14,550	68,120	78
Davenport, Iowa	16,925	77,743	78
Dayton, Ohio	270,979	110,310	*145
Decatur, Ill.	58,965	211,050	72
Denver, Colo.	84,100	243,350	65
Des Moines, Iowa	127,600	204,199	37
Detroit, Mich.	1,430,980	4,310,485	66
Duluth, Minn.	81,915	243,829	66
East Orange, N. J.	30,634	78,215	60
East St. Louis, Ill.	16,535	234,550	92
Elizabeth, N. J.	46,919	71,055	33
El Paso, Tex.	16,369	92,372	82
Erie, Pa.	162,740	156,959	*3
Fitchburg, Mass.	45,940	16,800	172
Fort Worth, Texas	22,603	108,730	79
Galveston, Texas	21,071	5,777	*264
Grand Rapids, Mich.	28,374	109,570	74
Hamilton, Ohio	157,474	5,650	*2651
Harrisburg, Pa.	7,150	146,160	95
Hartford, Conn.	27,830	240,965	88
Hoboken, N. J.	19,040	25,079	24
Holyoke, Mass.	4,460	35,375	87
Houston, Tex.	40,412	162,100	75
Huntington, W. Va.	64,030	85,480	25
Indianapolis, Ind.	191,902	479,526	59
Jackson, Mich.	18,398	22,710	18
Jacksonville, Fla.	115,275	102,470	*12
Jersey City, N. J.	256,176	276,510	7
Joliet, Ill.	13,500	34,500	60
Kansas City, Kans.	117,761	85,863	*37
Kansas City, Mo.	299,875	547,050	45
Knoxville, Tenn.	30,612	92,792	67
Lancaster, Pa.	3,730	8,800	57
Lansing, Mich.	7,635	46,530	83
Lawrence, Mass.	6,575	32,825	70
Lexington, Ky.	6,025	9,920	39
Lincoln, Nebr.	5,925	429,930	98
Long Beach, Cal.	16,214	53,508	69
Los Angeles, Cal.	173,424	988,142	81
Louisville, Ky.	96,658	84,670	*14
Lowell, Mass.	45,790	82,294	44
Macon, Ga.	19,761		
Manchester, N. H.	8,483	127,769	93
McKeesport, Pa.	1,565		
Memphis, Tenn.	75,365	163,585	53
Milwaukee, Wis.	48,778	762,322	55
Minneapolis, Minn.	99,095	917,435	88
Montgomery, Ala.	16,838	28,813	41
Mt. Vernon, N. Y.	4,850	32,840	85
Nashville, Tenn.	31,712	199,039	34
Newark, N. J.	248,517	1,084,708	67
New Bedford, Mass.	37,800	80,475	53
New Haven, Conn.	78,907	140,500	43
New Orleans, La.	85,245	98,327	13
New York City—			
Borough Manhattan	78,500	858,500	9
Borough Richmond	535,448	220,731	*142
Borough Brooklyn	2,536,216	1,410,466	*78
Borough Bronx	207,495	387,786	48
Norfolk, Va.	48,200	172,025	72
Oakland, Cal.	382,322	426,969	9
Oklahoma City, Okla.	18,265	332,612	91
Omaha, Nebr.	600,037	610,890	2
Pasadena, Cal.	13,229	102,519	87
Passaic, N. J.	8,750	21,000	58
Paterson, N. J.	113,164	81,626	*38
Peoria, Ill.	31,970	223,325	85
Philadelphia, Pa.	843,520	2,030,475	58
Pittsburgh, Pa.	317,384	1,740,451	24
Portland, Me.	54,172	518,647	89
Portland, Ore.	380,658	266,420	*42
Portsmouth, Va.	29,610	34,522	14
Pueblo, Colo.	13,450	252,440	95
Quincy, Mass.	2,801,432	102,531	*2632
Reading, Pa.	1,775	24,125	92
Richmond, Va.	45,358	99,594	54
Roanoke, Va.	4,887	5,100	4
Rochester, N. Y.	190,333	608,959	68
Saginaw, Mich.	38,768	26,495	*46
Salt Lake City, Utah	151,675	119,380	*26
San Antonio, Tex.	329,938	239,035	*37
San Diego, Cal.	67,968	41,425	*64
San Francisco, Cal.	310,305	900,509	65
San Jose, Cal.	13,855	29,509	53
Savannah, Ga.	12,535	3,495	*261
Schenectady, N. Y.	116,622	104,643	*11
Scranton, Pa.	10,420	238,770	96
Seattle, Wash.	1,273,390	509,405	*150
Sioux City, Iowa	25,900	202,750	87
South Bend, Ind.	23,126	94,176	75
Spokane, Wash.	15,555	66,195	76
Springfield, Ill.	4,965	95,095	94
Springfield, Mass.	65,999	185,900	64
Springfield, Mo.	11,880	15,200	21
St. Louis, Mo.	306,045	557,070	45
Stockton, Cal.	12,981	50,401	74
St. Paul, Minn.	100,747	431,050	77
Superior, Wis.	10,174	35,294	71
Syracuse, N. Y.	18,990	221,834	95
Tacoma, Wash.	249,313	88,815	*18
Tampa, Fla.	6,325	60,664	89
Terre Haute, Ind.	20,485	37,500	45
Toledo, Ohio	82,025	465,264	82
Topeka, Kans.	10,180	10,900	6
Trenton, N. J.	18,230	85,484	78
Troy, N. Y.	4,327	15,339	71
Utica, N. Y.	45,875	108,675	57
Washington, D. C.	265,835	809,760	67
West Hoboken, N. J.	2,785	18,035	84
Wheeling, W. Va.	7,378	14,530	49
Wichita, Kans.	37,610	662,345	90
Wilkes-Barre, Pa.	13,233	41,815	68
Wilmington, Del.	573,683	356,190	*61
Worcester, Mass.	140,317	189,674	26
Yonkers, N. Y.	5,600	186,600	96
York, Pa.	7,580	38,941	80
Youngstown, Ohio	155,890	364,300	57
Totals	$26,279,711	$43,244,788	39

*Gain.



J. Z. Young, of Minneapolis, Minn., secretary of the Tri-State Credit Association, and well known in the plumbing trade, has recently become associated with Weil Bros., of Chicago. He will be in charge of the concern's heating department.

Wm. Redieske, of Minneapolis, Minn., Great Northwest representative of the Good Mfg. Co., of New York City, was in Chicago the latter part of last week attending the burial of his mother, who died Monday, November 11th.

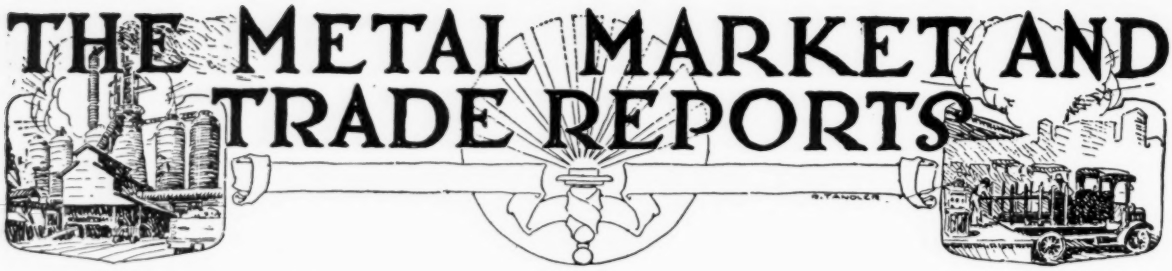
Harold L. Alt, of Anderson, Meyer & Co., Ltd., of New York City, will sail on December 14th for Shanghai, China, where he will locate permanently as chief draftsman for the above company. Mr. Alt is well known in heating and sanitary engineering circles, and has contributed no small amount to engineering literature.

Daniel L. Hanson has been appointed sales manager of the Shawmut Co., 54 Canal Street, Boston, Mass. Mr. Hanson has filled similar positions with two plumbing supply houses and he is therefore exceptionally well qualified for his new duties. He is also well known to the trade as author of "Raymore & Co., Plumbing and Heating Supplies," now being published in "Domestic Engineering."

S. C. Mead, manager of the Chicago office of the Kennedy Valve Mfg. Co., of Elmira, N. Y., has just returned from a business trip through Iowa and southern Illinois. He reports trade conditions to be in an active and healthy condition. "At Davenport, Iowa, I learned that 400 homes were being built under Government supervision," said he, "and the general feeling regarding future building operations is one of optimism."

The Borum Plumbing & Heating Co. has recently opened a new plumbing establishment at 120 Poplar Street, Memphis, Tenn.

THE METAL MARKET AND TRADE REPORTS



Steel and Iron.

Progress is being made toward defining the outlook for the steel industry since the armistice was signed. The knowledge that regulation is to be continued inspires confidence, and also the assurance that steps will be taken to prevent any demoralization due to the cancellation of orders is helping to steady the situation. The conditions, on which these contracts will be ended, have been indicated and are satisfactory to producers. The placing of power over cancellation of contracts with the War Industries Board is held to be particularly important, because that body also will have charge of the release of non-war industries from restrictions.

Advices from Washington that the Railroad Administration would hold back orders for rolling stock, until it could be bought at lower prices, confirmed a suspicion that had been entertained. There has been but little activity since fighting stopped, and until the basis for proceeding is more clearly outlined, the trade is expected to continue in the present waiting attitude. Reports from all of the trading centers of pig iron indicate that the end of hostilities has served to dampen activity. The present position of the industry is fairly comfortable, as a large tonnage is engaged ahead and support of prices at present levels is expected for the time being at least. But, looking ahead, there is ground for uncertainty, and it is this element that is operating to hold back demand from consumers and tends to delay transactions involving large tonnages. Selling and producing interests are busy in clearing up their position in relation to the changed conditions brought by the armistice, but the interval since it was signed has hardly been long enough for them to get their houses in order for a resumption of normal business. A large demand for iron is to be expected, but the doubt concerns whether this will develop at present high levels and, if not, what will be the position during the times of adjustment. Labor will be the chief problem. Prices are based upon shipment from Pittsburgh, Birmingham or Buffalo. The base price on No. 2 foundry, is $34, f. o. b., furnace, and standard Bessemer at $35.20, f. o. b., furnace, subject to the following changes from previous delivery prices: (a) Pig iron produced in Virginia, Tennessee and Birmingham districts and south of the Potomac and Ohio Rivers, including St. Louis, Mo., but not those furnaces bordering on the Ohio River, shall be sold on the basis of f. o. b., Birmingham. (b) Iron from furnaces located east of the Allegheny Mountains and north of the Potomac River will be sold on the basis of f. o. b., Pittsburgh. (c) Iron from all other producing districts shall be sold on basis of f. o. b., furnace.

Copper.

Price control and regulation of distribution is to be continued until January 1st by the arrangement made by the War Industries Board and copper producers, as arranged last week. Meantime plans for the readjustment of the industry to a peace basis can be thoroughly considered and the necessary changes made at that time No large amount of cancellations of war business is in sight, in fact, none of importance has yet appeared. Copper bought by the Allied Governments, it is expected, will be taken in large part for reconstruction and peace purposes, while that no longer needed for war products can be diverted to ordinary consumption, from which the supply has been long withheld. Established prices are as follows: 26 cents per pound for carlots, and 27.30 cents per pound for lesser quantities.

Tin.

An easy tone prevailed in the tin market last week, and transactions in spot at the close were concluded as low as 72½ cents in some instances. Stocks in this country are understood to be large, considerable being in the hands of consumers, who with few exceptions are showing little interest in the market. Now that hostilities are concluded the question of control, instituted but a short while ago, is being discussed, and it is held in some quarters that the continuance of the present regulation is not required by the circumstances, but there has been no intimation from those in authority as to any change in the Government's policy.

Lead.

The Lead Committee is still in control of the situation in lead. The output is engaged for a considerable period ahead for essential purposes, but these requirements may be curtailed by cancellation of Government orders. It is not expected that the position of lead will be improved before January 1st, although it is understood that new business has lessened some in volume. Prices remain unchanged at 8.05 cents per pound in New York, and 7.75 cents at East St. Louis.

Spelter.

The price of spelter has declined steadily since the announcement of the armistice. Only light inquiry has been received, centering upon spot and early deliveries. The closing quotation for Prime Western, New York delivery, was 8.55 cents and at East St. Louis 8.20 cents.

Other Metals.

Quotations on other metals in New York are as fol lows:

Aluminum (in 100-pound lots)	49 cents per lb.
Antimony, Chinese and Japanese	16 cents per lb.
Solder, No. 1	49 cents per lb.

New York Old Metal Market.

The following prices are current for old metals:

	Buying.	Selling.
Copper, heavy	21 to 22 cents	23½ cents
Copper, light	19 to 20 cents	21 cents
Brass, heavy	12 to 12½ cents	13½ cents
Brass, light	10 to 11 cents	12 cents
Brass turnings	12 to 12½ cents	13½ cents
Brass clippings	14½ to 15½ cents	16¼ cents
Tea lead	5 to 6 cents	7 cents
Aluminum clippings	28 to 29 cents	30 cents

Solder joints	13½	to	14	cents	15 cents
Tin foil, pure	42	to	46	cents	48 cents
Scrap zinc	5½	to	6	cents	7 cents
New zinc clips	6¼	to	6½	cents	7 cents
No. 1 pewter	50	to	55	cents	57 cents
Lead, heavy	7	to	7¼	cents	7½ cents
Cocks and faucets	16	to	17	cents	18 cents
Mixed babbitt	8	to	8¾	cents	9½ cents

Chicago Old Metal Market.

Chicago wholesale dealers' prices are nominally as follows:

	Buying.			Selling.
Heavy yellow brass	11½	to	12½ cents	13½ cents
Brass, light	8½	to	9½ cents	10½ cents
Brass, medium	9½	to	10½ cents	11½ cents
Brass clippings	13	to	14 cents	15 cents
Red brass	18	to	19 cents	20 cents
Cocks and faucets	17	to	18 cents	19 cents
Copper, heavy	20	to	21 cents	22 cents
Lead, heavy	6¾	to	7 cents	7½ cents
Tea lead	5	to	5½ cents	6 cents
Lead dross	4½	to	5 cents	6 cents
Solder joints	13	to	14 cents	15 cents
Old iron pipe, per ton	$22.00			$23.00

All Restrictions on Steel and Iron Pipe Raised.

Andrew Wheeler, chief of Bureau of Warehouse Distribution, Washington, D. C., under date of November 18th, sent the following official communication to manufacturers of steel and iron pipe: "Effective at once, all restrictions on sales and purchases by jobbers are hereby abolished. Warehouse prices, however, must be maintained. No reports of sales are required. Material may be sold by jobbers for any purposes whatever."

The Pipe Market.

No changes were announced in the pipe market during the past week.

Quotations on less than car lots of full weight steel pipe remain as follows:

	Butt Weld		Lap Weld	
	Blk.	Galv.	Blk.	Galv.
⅛ to ⅜ inch	37	12	....	....
½ inch	40	27	....	....
¾ to 3 inch	43	31	....	....
2 inch	....	....	37	25
2½ to 6 inch	....	....	39	28
7 to 12 inch	....	....	37	25
12 to 14 inch	....	....	28	....
15 inch	....	....	25	....

The quotations apply to all shipments from stock, regardless of quantity.

On extra strong and double extra strong steel pipe in less than car lots, quotations are as follows:

	Extra Strong				Double Extra Strong			
	Plain Ends		Plain Ends		Plain Ends		Plain Ends	
	Butt Weld		Lap Weld		Butt Weld		Lap Weld	
	Blk.	Galv.	Blk.	Galv.	Blk.	Galv.	Blk.	Galv.
⅛, ¼ and ⅜ inch	33	17	....	....	....	....	....	....
½ inch	37	26	....	....	29	20	....	....
¾ to 1¼ inch	41	30	....	....	32	23	....	....
2 to 2½ inch	42	31	....	....	34	25	....	....
3 inch	42	31	....	....	....	....	....	....
2 inch	....	....	35	25	....	....	27	19
2½ to 4 inch	....	....	37	27	....	....	29	21
4½ to 6 inch	....	....	36	26	....	....	28	20
7 to 8 inch	....	....	33	21	....	....	24	12
9 to 12 inch	....	....	28	16	....	....	....	....

With threads only, the basing discount is 1 and 1½ points lower. With threads and coupling the basing discount is 3 points lower. The quotations apply to all quantities less than car lots.

Quotations on full weight genuine iron pipe, in less than car lots, are as follows:

	Butt Weld		Lap Weld	
	Blk.	Galv.	Blk.	Galv.
⅛ and ¼ inch	14	+11	....	....
⅜ inch	15	+10	....	....
½ inch	19	2	....	....
¾ and 1 inch	24	9	....	....
1¼ inch	24	9	8	+7
1½ inch	24	9	16	3
2 inch	....	....	17	4
2½ to 6 inch	....	....	19	7
7 to 12 inch	....	....	16	4

These quotations are f. o. b. Pittsburgh, and apply to all shipments from stock, regardless of quantity.

On extra strong and double extra strong genuine wrought iron pipe, with plain ends, and in less than car lots, the quotations are as follows:

	Extra Strong				Double Extra Strong			
	Butt Weld		Lap Weld		Butt Weld		Lap Weld	
	Blk.	Galv.	Blk.	Galv.	Blk.	Galv.	Blk.	Galv.
⅛ to ⅜ inch	13	+ 3	....	....	....	....	....	....
½ inch	18	+ 6	....	....	6	+6	....	....
¾ and 1 inch	24	10	....	....	11	+1	....	....
1¼ inch	24	10	9	+6	11	+1	....	....
1½ inch	24	10	16	+3	11	+1	6	+6
2 inch	....	....	18	+6	....	....	6	+6
2½ to 4 inch	....	....	20	+9	....	....	8	+1
4½ to 6 inch	....	....	19	+8	....	....	7	+2
7 to 8 inch	....	....	11	List	....	....	....	....
9 to 12 inch	....	....	7	+5	....	....	....	....

These retail prices are f. o. b. Pittsburgh, and apply to all quantities except in car lots. With threads only, the basing discount is 1½ points lower. With threads and couplings, the basing discount is 3 points lower.

To ascertain the price in your city, deduct the proper less-than-carload freight rate from Pittsburgh to that city. Example: Base price on ¾-inch black steel pipe is 43 per cent, Pittsburgh, the less-than-carload rate to Patson is 17 cents, and the price, therefore, freight allowed to Patson, 41.3 per cent; on galvanized, 29.3 per cent. All other sizes to be figured on a comparative basis.

SALE OF COMMERCIAL STEEL TO TAKE PLACE OF WAR MATERIAL.

Paul Mackell, assistant to J. L. Replogle, director of steel supply, who is now in London, has just completed arrangements with a European country for 200,000 tons of commercial steel to be manufactured by American mills, replacing a similar tonnage of war material. This is the first important order of its kind since the signing of the armistice. The tonnage involved is a large one, but the importance of the matter lies in the fact that it indicates that the European countries needing steel for reconstruction will not delay in placing their orders.

SPITZBERGEN RICH IN IRON.

The iron deposits in the Arctic Island of Spitzbergen belonging to the British Northern Exploration Co., Ltd., have been visited by British and Norwegian experts, who declared them to be unsurpassed for richness in Europe. The iron is stated to test from 60 to 70 per cent, and to occur "not in patches or seams, but in veritable mountainous formations." The coal fields are also in course of development.

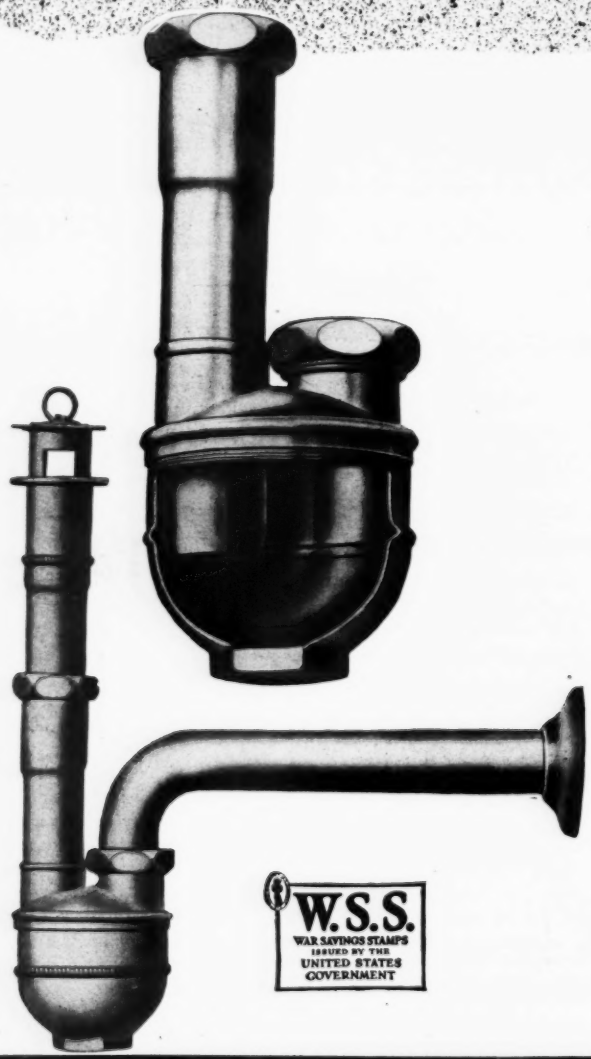
Last winter there were over 400 miners at Spitzbergen; last summer there were about double that number. The mines have been worked at high pressure, and the output for the current year exceeds 80,000 tons. Next year the output is expected to reach 100,000 tons.

You are helping the Government when you buy United States War Savings Stamps.

"WISECO

DEEP SEAL

CLEANOUT TRA



THE WISECO is on
ing Lavatory T
without the formality
just plain "Wiseco"—
connection with Plu

The construction of this lavatory trap is unique. Bod
at top of ball, with washer placed between the two parts t
in a moment and acts as a cleanout, making it the quickes
found heretofore only on high priced traps.

The sectional view shows location of inlet tube, whic
enters, it is given a rotary, or clean sweep motion. This s
as fast as it can leave through the outlet tube, therefore sy

"P" Trap is 11 inches from center of inlet nut to end
Trap is 21 inches from top of inlet nut to end of waste and
joint, 3″ P. O. plug, rubber stopper and 3″ heavy saw-t
tial fixture that costs very little more than an ordinary

WISECO Brass Products—from A to Z—are corr
fixtures, accurately made of best materials. In ordering
numerically. If you haven't a copy, write for one.

Your jobber is

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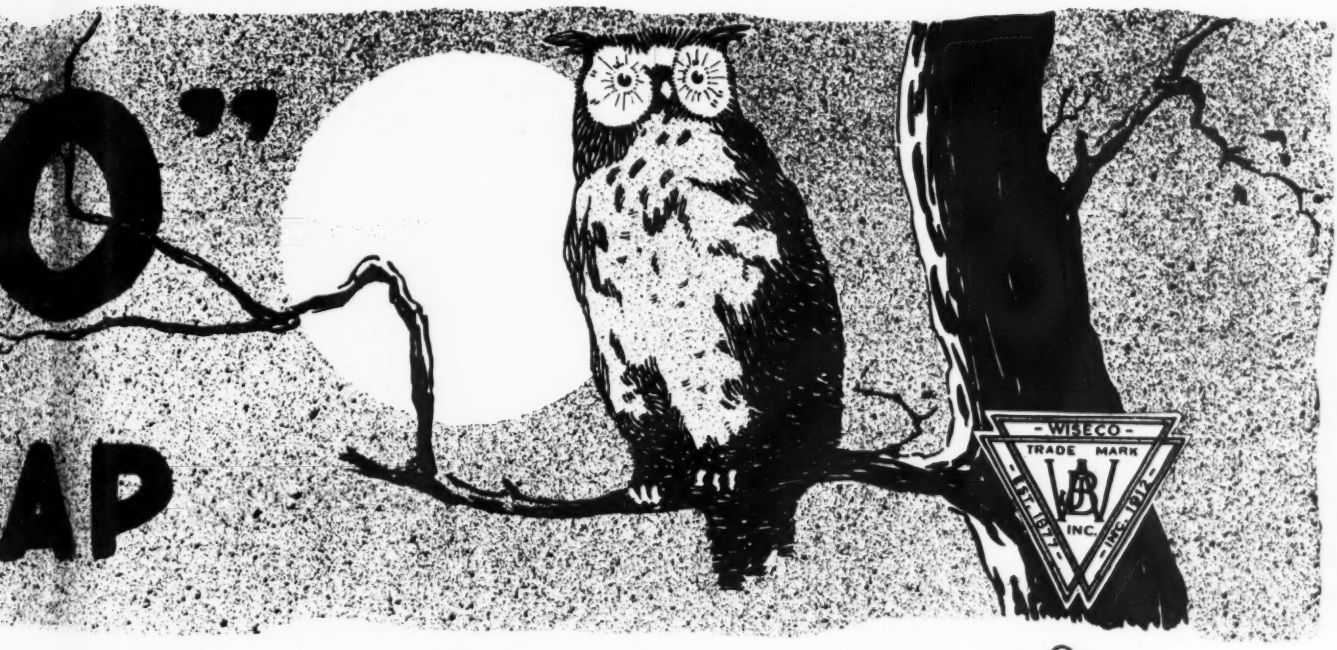
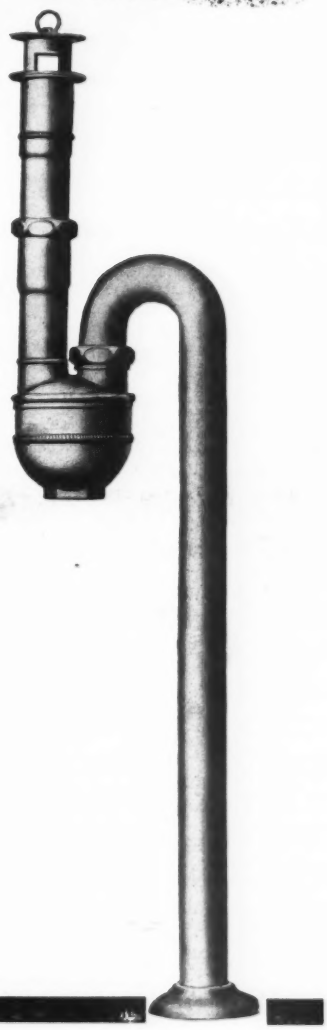
Manufacturers of



one of our popular Non-syphon- Traps that we have put out lity of a "Middle" name. It is "—A name that means much in Plumbers' Brass Products



e. Body consists of two pieces of heavy drawn brass, threaded and screwed together parts to form a perfectly water-tight joint. Entire bottom of ball can be unscrewed quickest and easiest trap on the market to clean. This convenient feature has been

, which is at one side of ball, extending into body of trap below center. As water This scours and cleans trap each time it is used. Water cannot enter body of trap efore syphoning is impossible.

to end of waste tube and 2 inches from top of inlet nut to center of waste. The "S" ste and 4¼ inches from center of inlet to center of waste. Furnished with 5″ slip saw-tooth edge .017 flange. The WISECO is a neat, attractive and most substan- dinary seamless tube trap and is well worth it.

re correct as to design, gauge and finish. The line includes both cast and wrought dering, use our Catalog C, which is conveniently indexed both alphabetically and

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s of Plumbers' Sanitary Brass Goods

AMONG THE PLUMBING AND HEATING CONTRACTORS

Illinois

Chicago and Vicinity.

Building Commissioner Charles Bostrom announces that Chicago is planning big things in the building line now that the war is over. The commissioner has just finished a survey of the city and he declares that indications point to great activity in construction work of every kind. He estimated that Chicago would spend about $75,000,000 during the next year in construction and reconstruction activity. Mr. Bostrom enumerated some of the buildings on which work was stopped and which is expected to be resumed. Among these are the Burlington superstructure, $800,000; the Chicago & Alton freight house, $750,000; Butler Bros., $2,500,000, and the Blackstone Hotel addition, $1,000,000. In order that the public may have some idea of the magnitude of building operations in Chicago covering a period of ten years, including the first ten months of this year, the commissioner has compiled the following figures:

Year	Buildings	Valuation
1908	10,771	$ 68,204,080
1909	11,241	90,558,580
1910	11,409	96,932,700
1911	11,106	165,269,700
1912	11,325	88,768,960
1913	10,792	89,668,427
1914	9,938	83,261,710
1915	10,339	97,289,680
1916	10,277	112,835,150
1917	4,938	64,244,150
1918 (Jan. 1 to Oct. 31)	2,341	28,406,450

The E. J. Claffey Co., of 12 West Illinois Street, has recently been awarded the contract to install the heating system in an office building, to be erected at a cost of $20,000, on Union Avenue, between Forty-first and Root Streets. B. J. Farwell, of 410 Sherman Street, will install the plumbing.

Nilson Bros., of 3222 North Halsted Street, have been awarded the contract to install plumbing and heating systems in a two-story Athletic Field House to be built for the government at Great Lakes Naval Training Station.

The George Hill Co., of 6314 South Central Avenue, will install the plumbing system in a foundry, to be erected at a cost of $25,000, at West Sixty-sixth Street and Sixtieth Avenue.

A. C. Hickey, of 564 West Madison Street, has secured the contract to remodel the plumbing system in an apartment building at Wabansia and Cicero Avenues.

W. J. Maclay, a plumbing contractor, of Clinton, Iowa, visited the Chicago trade this week.

Other Cities in the State.

C. Rosenmeyer, of Benton, has been awarded the contract to install the plumbing in a new $30,000 hotel in that city.

The Dailey & O'Brien Co., of Peoria, will install modern plumbing in a residence to be constructed, at a cost of $4,250, at 128 Rebecca Street, in that city.

The Ideal Plumbing & Heating Co., of Carbondale, has been awarded the contract to install plumbing and heating systems in a $35,000 factory, which is to be erected in that city.

Fowler Bros., of Centralia, will install the plumbing in fifty cottages to be erected, at a cost of $2,000 each, at Valier, for the Valier Coal Co.

E. F. Hertz, of Sheffield, has the sympathy of his friends in the plumbing and heating trade on account of the death of his sons, Edwin, 28 years, and Henry, 26 years. Both were killed in action during the last weeks of the American advance in France. The young men had been associated with their father in the plumbing business.

Missouri

St. Louis and Vicinity.

Thomas J. Sheehan, police commissioner and master plumber, handled the plumbing job in the $500,000 Kresge Building, just completed at Sixth, Washington and St. Charles Streets. This building is a concrete and terra cotta affair and was built in six months. All the contractors concerned say that it is one of the fastest jobs ever turned out in St. Louis, considering prevailing war conditions.

Local plumbing and heating men are figuring on some big work from the St. Louis School Board and the city of St. Louis. The School Board recently authorized a bond issue of $3,000,000 for new buildings to be constructed as soon as normal business conditions prevail. These new school buildings will have to be provided with plumbing and

Herman Miller, of the Southern Auto & Machinery Co., St. Louis; Edward S. Stebbins, Manager of the St. Louis Branch of the Glauber Brass Mfg. Co., Cleveland; and C. P. Wadley, Manager of the Buffalo Branch of Spencer Heater Co., Scranton, Pa.—From "Domestic Engineering" Photo, taken at St. Louis Convention of the National Association of Master Plumbers.

heating, which means an abundance of work for local contractors.

The War Department has leased the City Infirmary Building, at 5801 Arsenal Street, and will expend $100,000, mostly for new plumbing, so as to fit the building for a big hospital for invalided soldiers. The War Department took over the lease before peace was declared and will doubtless go through with the job. The plumbing probably will go to some local contractor.

James Stewart & Co. are working on a gigantic housing job at Newport News, Va., involving four apartments, each of which is to house 100 families. Over 2,500 men are working on this contract.

The declaration of peace has resulted in the War Department's cancelling of plans for the conversion of the Anheuser-Busch brewing plant into a cartridge factory. M. E. Singleton, chief of the Ordnance Department of this district, also announces that plans for the construction of two pyrotechnic plants at Fort Smith, Ark., and Oklahoma City, Okla., have been cancelled.

The Elliott-Barry Engineering Co. installed the heating system at Scott Field, a government aviation school, near Belleville. The Bradley Heating Co., also of St. Louis, handled the heating job at Camp Pike, Little Rock, and at Jefferson Barracks, St. Louis.

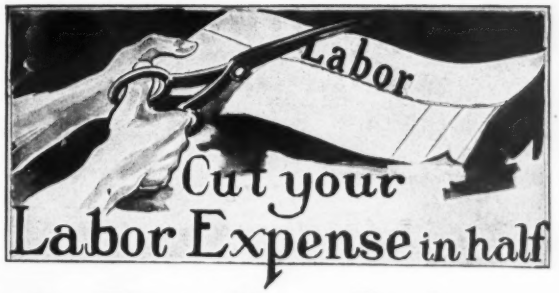
J. H. Clucas, of St. Louis, has left for Warren, O., where he recently secured a good-sized plumbing contract.

The Southern Wheel Co. has just bought 21 acres of ground on the Terminal tracks, near Euclid Avenue, where the company intends to erect a large addition to its $2,000,000 plant.

The American Car & Foundry Co. has just taken out a permit for the contruction of a machine shop at 2134 DeKalb Street. It was recently announced that this company had resumed work on 3,500 freight cars for Russia, which were originally contracted for by the American-Russian Railway Commission, with a credit advanced by the Government.

Hencke-Werner Plumbing Co. installed the plumbing in the new Washington University Military barracks, while Joseph Sheehan secured the contract for plumbing at the St. Louis University, where student officers are now studying military tactics. The plumbing jobs consisted mainly of installation of shower baths, toilets, lavatories and sewer drainage.

J. A. McBride has been awarded a $130,000 plumbing job in the new Jane Building, the $3,000,000 office structure and arcade which Edward Mallinckrodt is erecting at Eighth, Olive and Pine Streets. This is the largest plumbing contract let in St. Louis since the Railway Exchange Building was constructed. Every room in the Jane Building will have running hot and cold water, calling for 600 lavatories and as many more water faucets, etc. A refrigeration plant in the basement will supply drinking water to every floor. Sodemann Heat & Power Co., also of St. Louis, is installing the heating apparatus in this building. Over 150 tons of radiation and pipe, eight car loads, will be used on the job. The heating job alone will cost $80,000. An arcade, 40 by 232, and 40 feet high, will be one of the features of the building. The contractors went down 80 feet to obtain a rock foundation, boring through quick sand. The building will be 17 stories high and will have over 350,000 square feet of floor space under roof. Twenty-four hundred tons of steel will be used in reinforcing the 1,000,000 cubic yards of concrete that enters into the construction of this office building.



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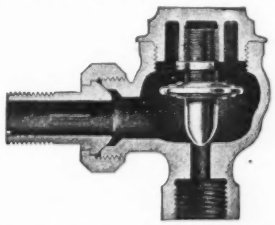

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The Marsh REFLUX Return Line Trap is for use on the return end of radiators of low pressure, vapor and vacuum systems of heating. It is the result of a careful investigation into the actual requirements that must be fulfilled by a radiator return valve, in order that it may accomplish what is desired of it, namely, **to free the radiator of air and water without the loss of steam** and to do so **noiselessly.**

The Marsh Reflux Junior Thermostatic Trap is recommended for small radiators and coils. This Trap for the small and the Original Reflux for the large units will make an ideal job.

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May be furnished either concealed adjustment (as illustrated) or with outside adjustment.

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and our complete electric system, are fully described in attractive folder "A TURN of the FAUCET." Write for your copy today.

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All Mechanically Correct, Perfect in Design and Made of Strong, Tough Iron.

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New Jersey

West New York and Vicinity.

West New York will again attempt to institute the building commission it has long felt the need of and the results of the recent local election, swinging the balance of power in the town commission, indicate that favorable action will now be taken on this important question. It will be remembered that two years ago, when plans had been arranged for the establishment of a building department or commission, the council, which shortly after took office, abolished the idea, and during the administration now ending nothing further was attempted.

The Master Plumbers' Association of North Hudson, is vitally interested in the matter and in accord with the proposition of building regulation. At present there is no regulatory code other than that enforced by the Tenement House Department, covering only a narrow scope of buildings and building matters. To be sure, an efficient sanitary code is in force, administered by the Health Department, but it is the purpose of those interested in plumbing circles to have the inspection of plumbing under the jurisdiction of the building department, when that department is established.

Charles Turkowsky, of West New York, master plumber and commissioner of the Board of Health, is again back in action at his establishment on Tenth Street, having been absent during a two weeks' siege of influenza.

Union Hill.

The great tidings of peace flashed over the wires a few days since, bringing with it joy and rejoicing in copious measure, in which everybody took his or her share, but probably no one was made so happy as A. C. Krieger, plumbing inspector of Union Hill. For, be it known, Mr. Krieger was entitled to, and took, a double portion of the joy and then proceeded to rejoice in double time. To the ordinary citizen peace meant peace and victory; something to sing about and parade for, but it meant more to Union Hill's plumbing inspector. Not only victory and another notch in Uncle Sam's gun stock, and white bread and plenty of coal! To him it means all this and more. It means plenty of ammunition, no more conserving of shot and shell—no more restriction on these necessary commodities.

You see, Krieger is a hunter bold, and like all good Americans has kept his own personal pleasure in check, while he saved things for the fellows who were over in France after the big game. In his case, the wheat and fuel were easy. The big sacrifice came with ammunition. So like a good sportsman when, during the past few seasons, he felt he simply had to have a little recreation, he sallied forth to Bernderne's reservation at Old Bridge, his favorite hunting ground, with a selection of air rifles. This was, of course, rather tame. Tame, until the last trip, a few weeks back, when the sheriff supplied a little excitement. It seems that Krieger miscalculated the open season for quail, and reports have it that the sheriff took him down to the county seat for accurate and judicial interpretation of the calendar. Rumors also have it that the charge fell through, because the quail he captured were not quail at all, but only common sparrows of the garden variety. Therefore Krieger's joy over the ending of the war is two-fold, victory and no more air rifles, and he's now gathering data on boat and train schedules for Africa. For he is going to tackle the big stuff at the first opportunity, and open the sluice gates of his pent-up enthusiasm. He figures it will take at least two trips over there to use up all the ammunition he denied himself during the past eighteen months.

Other Cities in the State.

G. Vanaman, of Cape May, has been awarded the contract for the installation of modern plumbing in the marine quarters being erected by the Government in Tuckerton.

E. C. Fish, of Riverside, has secured the contract for the installation of plumbing in A. F. Donald's new residence in Edgewater Park.

W. B. Lynch, of Palmyra, will install a modern plumbing system in Chas. Dunbar's new bungalow in that town.

Henry Kleinhans, of 1204 East Grand Street, Elizabeth, is installing plumbing and heating systems in 54 houses being erected by the A. H. Bull Shipping Co. The contract amounts to $25,000. Mr. Kleinhans is also installing plumbing and heating in A. H. Bull's residence, 217 West Jersey Street, Elizabeth. The latter contract amounts to $15,000.

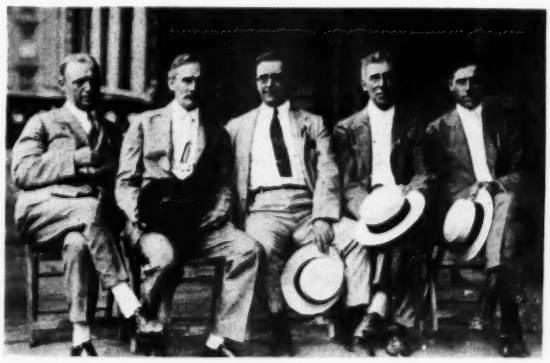
New York

New York and Vicinity.

The trade in Brooklyn is looking forward to a substantial business for the near future. The opinion is prevalent that the ending of the war means for Brooklyn a greater development in building operations than for any borough of the Greater City. Just when activity along this line will set in is a matter of conjecture, but it is the opinion of many that next summer will see building in full swing.

One prominent man in trade affairs in that borough also commented on the improved relations existing between the various branches of the industry, closer relations brought about by war activity and interest. He said, each phase of war work with its common interest and action, whether it was war department building, charity campaigns or Liberty Loan compaigns brought the master plumbers closer to the journeymen and to manufacturers and jobbers, a status wherein their interests were identical and provided an opportunity to develop more friendly relations and better feeling. They have had a better opportunity than ever before to study the requirements and interests of each side. This he predicts will be of lasting benefit and do more toward the healthy development of the industry than anything that has ever been attempted.

Nicholas Fehlinger, of 31 Spruce Street, will remodel the plumbing in the Philippine National Bank's building at 36 Broadway.



Wm. Redieske, of Minneapolis; F. Biedenmeister, W. B. McCurdie, and C. A. Follett, all of New York City, and J. C. Kettells, of St. Louis; all of the Good Mfg. Co., of New York City.—From "Domestic Engineering" Photo, taken at the St. Louis Convention of the National Association of Master Plumbers.

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Three features in which our **Malleable Fittings Excel**

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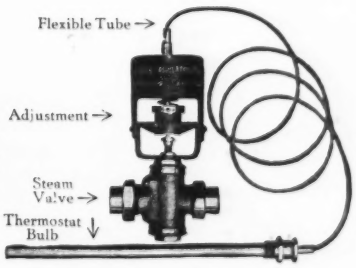
Dependable at all seasons because efficient, serviceable, self-contained.



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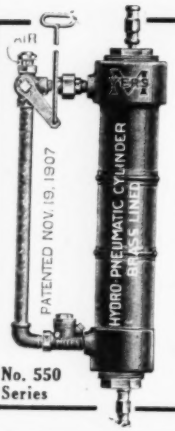

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ANTI SYPHON TRAPS the best for durability, the quality unquestioned.
The Appearance exceptional and the Service sure.
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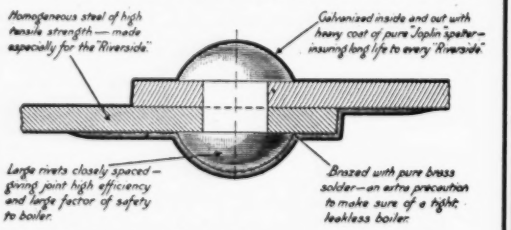
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Galvanized inside and out with heavy coat of pure Joplin spelter — insuring long life to every "Riverside"
Large rivets closely spaced — giving joint high efficiency and large factor of safety to boiler.
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The Strongest and Tightest Seam on any Range Boiler

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Pennsylvania

Philadelphia and Vicinity.

Park Bros., of 5844 Montrose Street, have been awarded the contracts for the installation of modern plumbing in M. Bracker's new bungalow in East Lansdowne, and in two large residences being erected in this city by Edward Schar. The latter contract amounts to $5,000.

J. A. Quinn, of 1613 Unity Street, will install the plumbing in the Frankford Grocery Co.'s new warehouse in Frankford.

C. T. Ennis, of Harrisburg, has been awarded the contract for the installation of plumbing in the engine house, being erected at Rutherford.

R. J. Hoben, of Twenty-first Street and DeLancey Place, will install the plumbing in the new gymnasium for the Baldwin Locomotive Works in Eddystone.

The Hazelton Machinery & Supply Co., of Hazelton, has secured the contract for the installation of plumbing and heating systems in the grain house being erected in that city. The contract amounts to $10,000.

J. M. Knight & Son, of Philadelphia, have been awarded the contract for the installation of the plumbing, and the Bethlehem Sheet Metal Co., of Bethlehem, that for the heating in 1,193 residences which will be erected in Bethlehem for the Bethlehem Steel Co.

Jos. O'Hara, of Scranton, has recently secured the contract for the installation of plumbing in the high school being erected in Carbondale.

Pittsburgh and Vicinity.

Joseph A. Weldon, of the plumbing firm of Weldon & Kelly and president of the Master Plumbers' Association, was made chairman of the nominating committee of the Pittsburgh Builders' Exchange at a recent meeting held for the purpose of advancing the interests of the crafts. Samuel Holmes, F. L. Stulen, L. H. Crick and H. H. Gilmore were also named as members of the committee. The election of officers for the coming year will be held early in January. President S. P. Trimble, of the Exchange, presided at the meeting and a message was forwarded to the War Industries Board urging the removal of all restrictions on the building industry, a 50 per cent modification having been announced.

The new regulations for building as announced from Washington have been received by the crafts here with more or less enthusiasm, and a decided impetus has been noticed to the building industry, affecting in a large measure the plumbing, heating and ventilating branches. President Joseph A. Weldon, of the Master Plumbers' Association, is pleased with the situation but feels that even more latitude should be permitted by the War Industries Board. These views represent the sentiment of the trades as a whole, and Washington officials are being urged in every possible manner to speedily remove all regulations retarding the development of business in this district. Under the new rules of the board there can be a great amount of home building without special permits for the first time in some months. Last spring it was shown that there was a shortage of not less than 10,000 home buildings here, and the news has brought a great deal of relief. Secretary Edmund M. Tate, of the Builders' Exchange, declares that there will be an immediate brisk demand for such construction. "Lifting the ban has opened the doors for much dwelling house construction," he said a few days ago. "I know of many individual cases that have been held up. Architects have been busy sketching plans for months for clients, awaiting the lifting of the ban, and they all say there will be an early revival of interest now. Thus building operations, in a stagnant market in Pittsburgh

for several years, are now about to take a start founded on urgent necessities and no restrictions to hinder from government needs. As we see it now, the possibilities are more promising than at any time for a number of years."

The Master Plumbers' meeting notices have been attracting much attention through the unique manner in which they are gotten up, thanks to Secretary John H. Keane. The notices are issued on a single sheet of paper in the form of a news circular, and the editor has named it "The Pipe." Besides announcing the call for meetings "The Pipe" contains other matters of general interest to the members of the association. This week's issue contains the following: "There was no bargain day crowd at the last meeting. The 'I' was supposed to have been knocked out of the 'flu.' We guess the I was knocked out and the fu (few) were left to make a quorum. The flu reminds us that since the last meeting the kaiser has it. He flew into Holland, but before he got away, Foch put his pipe in a vise, applied the wrench and squeezed so hard that Bill can't get a drink of Holland gin down. He sure is in Dutch."

On Tuesday night last there was a gala celebration by the Master Plumbers' Association to commemorate the ending of the war. President Joseph H. Weldon and Secretary John H. Keane were in charge of the event, which included a service flag dedication. Many of the members brought their wives and families and real sociability was the rule. An excellent program of music, instrumental and vocal, was given, and addresses were made by leading members as well as invited guests. The celebration was held in the assembly rooms of the Builders' Exchange.

Massachusetts

Boston and Vicinity.

Members of the Boston Association of Master Steamfitters, Inc., have recently voted to change the name of the organization to the "Heating and Piping Contractors Boston Association, Inc." The association will continue to maintain headquarters at Room 648, Tremont Building, 73 Tremont Street, Boston. C. W. Sisson is secretary.

Wyckoff & Lloyd Co., of 19 Worthington Street, Springfield, has the contract for plumbing and steam heating in a 12-car garage being erected in Westfield for the Westfield Manufacturing Co.

The Master Plumbers' Association of Boston and Vicinity will meet on November 26th. It will be the first meeting in five weeks, the last scheduled meeting being omitted in order that the members might attend the dinner of the Massachusetts Sanitary Club.

Many Massachusetts master plumbers are making plans to re-employ journeymen who left to enter the military or naval service since the United States entered the war. In many cases the masters, because of the shortage of labor, have not been able to fill the men's places, while in other instances men have been taken on with the understanding that their employment was to cease when the older employes return from the war.

The annual meeting of the North Shore Master Plumbers' Association for the election of officers and other business will be held at Salem on Friday, December 6th.

Building operations involving an initial outlay of $50,000,000 will soon be in progress in this state as a result of the coming of peace, in the opinion of A. C. Ratchesky, chairman of the state board on Non-war Construction. The raising of the ban on many classes of work will result in immediate starting up of much construction work. Although all master plumbers are not so optimistic as is Mr. Ratch-

The "JIFFY" Collapsible Laundry Tray Frame

Saves Time, Bother and Expense

Hundreds of plumbers who have used "Jiffy" are enthusiastic about it. You would be too, if you knew how easy it is to handle, how quickly and securely it can be put up and what long years of service it will give. Made of heavy angle iron. Braces of heavy steel, coated with durable black paint. It's a money maker for you. Go see the "Jiffy" at your jobber.

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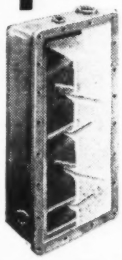
A Hard Water Heater



The Sharp's Cleanout Water Heater is primarily a hard water heater. Unlike the coil type, it does not readily clog with lime. When it does, after a long time, only a cleaning is necessary to have it in working order again. These are the main reasons why the Sharp's will prove a good seller for you, though the low gas bill and the lifetime of service it will give likewise prove inducements for its purchase.

Wire at once for literature, and get full details.

GENERAL MANUFACTURING CO.
(Heater Dept.)
67 19th St. WHEELING, W. VA.

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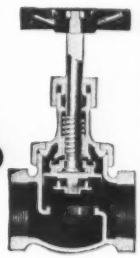
UNION BONNET
DOUBLE SEAT
VALVES



While we furnish a full line of high pressure Mill Supply Globe, Angle, and Gate Valves, we **Specialize on High Grade Radiator Valves,** and manufacture the **Largest Line** of any company in this, or any other country.

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Let us send you catalogue showing line complete and quote prices on your requirements.

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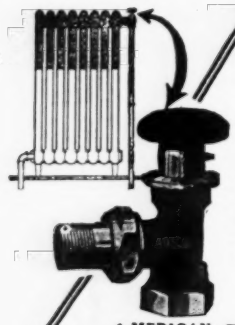
Plumbing Specialties and Repairs
The Dependable Line
FOR THE UPKEEP OF
Sanitary Institutions
SEE CATALOG "H"
Wolverine Brass Works
Grand Rapids, Mich. San Francisco, Cal.



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You can use valve 1/8, 2/3, 3/4 opening—any desired amount—to use just that much radiation. It is easy to change from a hot-water system to ADSCO.

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Manufactured by

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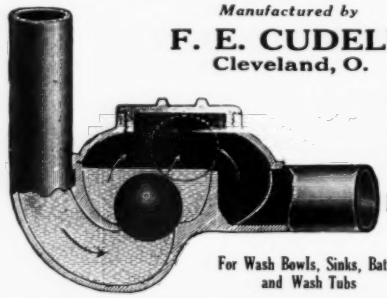

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For Wash Bowls, Sinks, Baths and Wash Tubs

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NOW IS THE TIME FOR ALL THINGS

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Damper Regulators

High Pressure
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Dole PACKLESS GRADUATED RADIATOR VALVE

Embodies a new and exclusive DOLE principle by which you can have every degree of opening required in vacuum or vapor steam heating.

This Adjustment is easily made while the steam is on.

Nothing like it on the market.

Furnished with the DOLE **without extra cost.**

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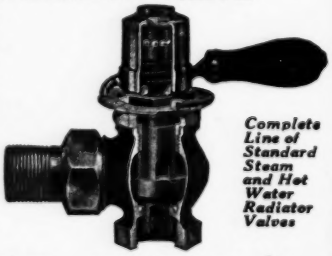


Complete Line of Standard Steam and Hot Water Radiator Valves

THE DOLE VALVE CO. 208 No. Wells St. Chicago

esky they are ready to handle any plumbing or heating contracts incident to new construction work, which may come their way.

Rhode Island

The contract for plumbing in two two-family houses being erected at Pawtucket for the Crompton Co. has been awarded to Albert E. Touchet, Inc., of Boston. As soon as these houses are completed a six-family group is to be erected for the same concern.

Graham Bros., of Providence, have the contract for plumbing and heating in connection with the transformation of a two-story building on Harrison Street, Providence, into a state armory. The plumbing work will be extensive, including shower baths and toilets for officers and men, and much other work.

California

San Francisco and Vicinity.

The San Francisco plumbing, heating and allied trades joined with other interests of the city in celebrating the signing of the armistice, on November 11th, and the prospect for the cessation of hostilities, and the immediate start toward readjustment from the war times to a peace basis puts the trade here in better spirits than for a long time. It is generally conceded that there is good cause for rejoicing from a business standpoint, as well as for patriotic reasons, there being every indication that San Francisco and the other Bay cities will soon be humming with a rush of building. The raising of some of the restrictions on non-war work promises to help out immediately. It will take some little time, no doubt, to get under way the big program of building now mapped out for this vicinity. For instance, in the city alone buildings to cost somewhere between $40,000,000 and $50,000,000 are projected, according to the combined estimates of San Francisco architects. Construction it is stated, on much of this work will be started just as soon as conditions settle down somewhat, and materials are available. Every kind of building is included in this big program.

J. E. O'Mara, 445 Minna Street, San Francisco, has been awarded the contract for the steam heating system, oil burning plant and other work at the Western Electric Co.'s headquarters at Fortieth and Hollis Streets, Emeryville, Cal. The contract amounts to $5,675.

Mangrum & Otter have been awarded the contract for installing heating and ventilating systems in the building at the northwest corner of Sutter and Mason Streets. The contract amounts to $1,840.

The Board of Supervisors has ordered plans prepared for a six-room school house to be erected at Corbett and Fort Avenues, bids for which will be desired at an early date.

Housing conditions in the southern end of the city, especially south of Market Street, are being seriously considered by the Southern Promotion Association. It is proposed to erect a number of low-priced cottages for working men.

Other Cities in the State.

Bids have been called for the construction of the foundation of a new service building at the Olive View Sanitarium, Los Angeles, upon completion of which bids will be taken for the superstructure, plumbing and other work.

Plans are being prepared and bids will be called at an early date for the erection of an eighteen-story bank and office building at Seventh and K Streets, at Sacramento, to house the Sacramento Bank and the Sutter Fort National

Bank. This is work which has been postponed for some time on account of war conditions.

Permits to build 300 houses were issued a few days ago by the city of Berkeley to the United States Housing Corporation.

The erection of cottages at the State Hospital, in Stockton, and a tubercular ward, which were provided for by the last legislature, will be started shortly. The sum of $45,000 has been appropriated for the cottages, and $10,000 has been allowed for the ward.

Ohio

Cleveland and Vicinity.

A. C. Hausman, of 8603 Cedar Avenue, recently secured the contract for the installation of plumbing in the Woolworth Building.

P. J. Turnbull Co., of 1703 West Twenty-fifth Street, has secured the contract for the installation of modern plumbing in the Lakewood High School. The contract amounts to $60,000.

The Krestle Plumbing Co. is remodeling the plumbing in several residences in this city.

Wm. H. Dehn, of the Paramount Brass & Mfg. Co., has just recovered from a serious illness.

Geo. Roberts has been awarded the contract for the installation of plumbing in the building being erected for the Student Army at the University in Cleveland. The contract amounts to $20,000.

Carroll & Gessert are installing modern plumbing in two factories and remodeling the plumbing in seventeen residences.

Robert Patterson & Co. have been awarded the contract for remodeling the plumbing in St. John's Episcopal Church.

The Kadlecek Plumbing & Heating Co., of 5365 Broadway, is remodeling the plumbing in thirteen factories and eleven residences in this city and in two factories at Bedford.

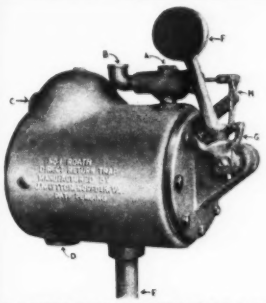
Maskell-George Co., of 1148 Prospect Avenue, recently secured the contracts for the installation of plumbing and heating systems in the Willard Storage Battery Bldg., the American Mfg. Co.'s plant and in three residences at Shaker Lake.

W. S. Bayer, of the Grabler Mfg. Co., has just returned from an extended business trip through Ohio and Michigan and reports prospects good in the plumbing and heating field for the coming year.

Edward M. Schaefer, of 3880 West Nineteenth Street, has been awarded the contract for the installation of plumbing in 140 apartments on Washington Park Boulevard.

The Miles Heating & Ventilating Co., of 610 Park Building, has been awarded the contracts for the installation of

W. A. Zigman, of the Glauber Brass Mfg. Co., Cleveland, O.; Past National President W. H. Halsey, of Milwaukee, and J. G. Halsey, of the Milwaukee Branch of the J. L. Mott Iron Works, of Trenton, N. J.—From "Domestic Engineering" Photo.



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Low Pressure Direct Return Trap

For all types of

Steam Heating Systems

Eliminates Air, Promotes Circulation, Saves Fuel

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LYTTON-ROWE MANUFACTURING CORP.

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Originators of This Style Trap

Why Worry About Gas or Coal?

Sands Kerosene Oil Burner

will satisfy all your needs

Put it in your grate.
Put it in your gas or coal stove.
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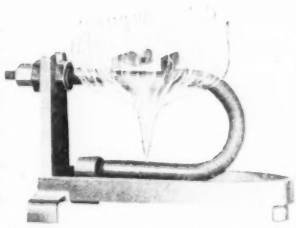

A wonderful plumbers' blow torch.
A clever urn heater.
An ideal fire for bake oven.
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Can be used for tempering tools.
Just the thing for a greenhouse.

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Makers of the famous SANDS Kerosene Water Heater

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Shower Heads

With Removable Face

Made with or without Ball Joint in the following sizes:

3 in., 4 in., 4½ in., 5 in., 6 in., 6½ in. and 8 in.

As good as it is possible to make a shower head.

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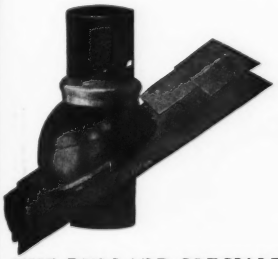
Order From Your Jobber. Specify the Milwaukee. Made by

Milwaukee Flush Valve Co., Milwaukee, Wis.

NO ROOF IS SUPERIOR TO ITS FLANGE



Therefore, some PLUMBER is the father of every leaky roof.

The Bullard Roof Flange

is acknowledged as the only PERFECT FLANGE by busy men who have made satisfying installations.

THE BULLARD SPECIALTY COMPANY, Tiffin, O.

Eagle All Lead Roof Flange

LEAD PIPE
Length, 6 inches
Diameter, 4 ⅛ inches
Made in Angles, 45 deg., 22½ deg. and Straight.

SIZE OF APRON
15 inches Square

No Caulking To Be Done
Joints Lead-burned — No Solder Used

Flexible Adjustable Economical

Write for Circular and Prices.

Manufactured only by

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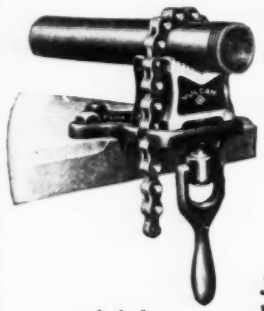
HAYNES SELLING COMPANY

Heating Specialists

Modulated and Vacuum Heating Systems Adapted for all Types of Buildings

Over 25 Years' Experience

1711 Sansom Street Philadelphia, Pa.



Williams' "Vulcan" Chain Pipe Vise

Made entirely of Wrought Steel

3 sizes for ⅛ to 8" Pipe

J. H. Williams & Co.
17 Richards St., Brooklyn, N. Y.
17 So. Clinton Street, Chicago

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TRADE MARK SIGNET REG. U.S. PAT. OFF.

No More Back Water

where the SIGNET Drain is used.

Keeps basement dry, clean and sanitary. A positive safeguard, either wet or dry, against sewer gas and water.

Brass working parts submerged—works automatically by gravity.

Always works. Always satisfactory.

Write for literature.

CRAMPTON-FARLEY BRASS CO.
KANSAS CITY, MO.

heating systems in the following buildings: The Kenmore High School, at Kenmore; the Cleveland Pneumatic Tool Works, and the R. D. Carburetor plant, both of Cleveland, and the Warrensville Public School at Warrensville.

Hill & Dolsen, of 8346 Broadway, have been awarded the contracts for the installation of modern plumbing systems in the American Steel & Wire Co.'s plant and in the Newburg & South Shore Railway plant.

Indiana

Indianapolis and Vicinity.

Indianapolis master plumbers are busy these days with thoughts of peace and its effect on the plumbing and heating trades, and are vying with each other in an effort to predict what the probable developments will be. In the past there has always been a precedent to follow, but the conditions brought on by the great world war are so unique and so much more severe, than anything ever experienced before, that members of the trade are, for the most part, groping about in the dark.

In general, however, there seems to be unanimity of opinion that whatever changes will take place will be gradual and will permit of intelligent adjustment. There is also a general belief that the standard of wage remuneration will not return to the old pre-war level, because, it is pointed out, the influx of low-priced immigrant labor no doubt will be extremely low for a number of years because of the great task of upbuilding the shell-ridden territories overseas.

That the plumbing and heating trades of the country will profit by the peace negotiations because of the tremendous building boom, which is bound to come sooner or later, is the opinion of Harry Callon, Jr., of the firm of Callon Bros., 24 South Alabama Street. Although the Callon firm lost a nice-sized contract, the one calling for the installation of plumbing and heating systems in the community house and twelve double houses which were to be erected by the United States Housing Corporation at Mars Hill, because of the termination of the war, members of the firm are still optimistic and believe that many prosperous days are ahead for the plumbing and heating contractors. "There will be plenty of new building along nearly all lines, now that the war has ended," said Mr. Callon. "Building of homes by people of moderate means will no doubt be of generous proportions. The people of our country have been taught the meaning of thrift. Hundreds and thousands of families right here in Indianapolis have benefited by the issuance of Liberty Bonds in small denominations, and these same families have money put away in these bonds that never before realized what it was to save something. There will be hundreds of these families who will apply their savings to a payment on a home. The idea of home building and owning a home always has been deep in the hearts of the American people. They are home loving and in their Liberty Bond savings will see an opportunity of becoming home owners. Every new home that is built will mean work for the plumbing and heating trades."

Building operations are governed in the main by the conditions of the money market, Mr. Callon said, and he predicts the money market will soon be in such shape that it will be an easy matter for people to obtain loans. Many building operations, which have been held in abeyance because of the war-time necessities naturally will go forward, he says, as soon as these war-time restrictions can be lifted.

"Price of labor, in my opinion, will continue at a pretty high level for several years," continued Mr. Callon. "The nations in Europe have large debts to pay, and all of the other principal countries of the world are practically in the same fix. They can not liquidate these debts by placing their industries upon a strictly competitive business. If they decrease their wages to labor and cut prices of their products it only stands to reason that they must produce in a proportionate ratio in order to meet their obligations."

Announcement this week by the Indiana State Council of Defense of the removal of certain restrictions on construction projects by the War Industries Board at Washington brought a feeling of joy to the hearts of all plumbing and heating contractors through Indiana. The modifications, it is pointed out, mean that building may proceed again in a nearly normal manner.

Local builders say that 95 per cent of the interrupted building, which may now proceed without interference, comes in the class of homes, garages and the like, for which war-time permits formerly were necessary, but on which there is now no restriction, unless they cost more than $10,000. However, by far the greatest money-moving work is that in the other classes from which restrictions have been removed.

The release of utilities improvement also will open up many millions of dollars' worth of new construction. One specific example in this connection is found in the project under consideration at Whiting, Ind. It had been proposed to erect a big sewage pumping station there to force sewage into Lake Michigan from houses in that vicinity, but the project had to be held up on account of the war. Now it can go ahead. The new station will cost approximately $110,000.

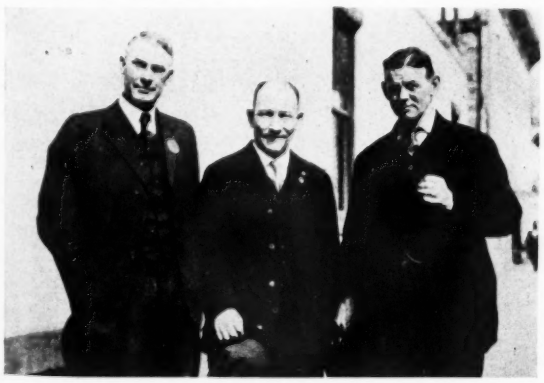
Other Cities in the State.

The Peru Heating Co., of Peru, has received the contract for the installation of a heating system in the new $15,000 bank and office building that is being erected for the Home Saving & Loan Association of Peru.

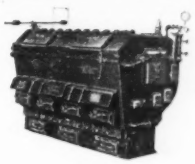
W. H. Crawford, of Noblesville, was the successful bidder for the plumbing and heating contracts on the new $20,000 office and garage building that is to be erected for the Noblesville Milling Co. Work will be started soon.

The firm of Neal & Stoll, of Connersville, has been awarded the contract for the installation of plumbing and heating systems in a new $6,000 residence for Mrs. Fred Snyder.

Powell & Dorste, of Anderson, were the successful bid-



A. T. Olsen, X. J. Kennedy and Carl Graeber, all of Lawrence, Kans. From "Domestic Engineering" Photo taken at Kansas Master Plumbers' Convention.

ECONOMY  EFFICIENCY

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Saves Fuel Labor
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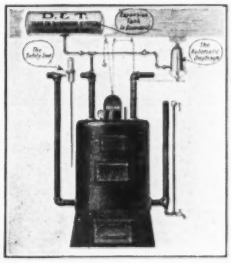
D & T Tank-in-Basement System
Saves 25% on Coal Bills



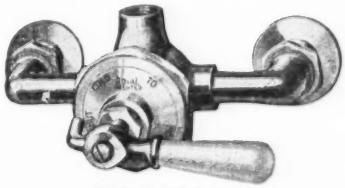
It is the most economical and efficient method of Hot Water Heating known. It will save your client money on the purchase of equipment, the installation and up-keep.

Over 35,000 D. & T. systems now in use.

Write for Booklet "Progress in Hot Water Heating."

D & T Manufacturing Co.
1907-09 Pine Street
St. Louis, Mo.

ROYAL
Mixing Valve for Showers
Simple in Operation—Few Working Parts.



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Building Bigger Business
On Sanitary Principles

You Need "SANIDOME" Bibbs Basin and Bath Cocks

The Only Strictly Sanitary Line of Products
Write Us For Information

The Haydenville Company
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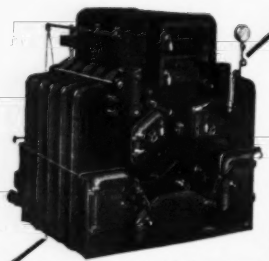

The Newport

The Magazine Feed Boiler with the Adjustable Throat

The Patriotic Boiler

This year home owners will be forced to take various sizes and kinds of fuel—pea and buckwheat along with chestnut, range and egg. Also non-caking nut soft coal. The Newport is the only boiler which burns efficiently all these sizes and kinds—separately or mixed. Thus your customers are safe, for unusual fuel conditions are overcome. Send for "Newport Heating" document.

Newport Boiler Company
107 South Dearborn Street Chicago

LITTLE GIANT EXPANSION SCREW SLEEVES
Insure permanent expansion the entire length of screw inserted. Expansion begins at first turn of screw, screw making its own thread. No pipe sleeves or wedge nut required. For machinery, electrical work, steam and gas pipe, hanging signs, slate, marble or tile work, the LITTLE GIANT is best.
STANNARD MFG. CO. SPRINGFIELD, MASS.

WE BUY
Iron Pipe Couplings
SPOT CASH

How many, either pounds or pieces, have you of various sizes?

GWILLIAM SUPPLY COMPANY
615 Christian Street PHILADELPHIA, PA.

Facts about our STANDARD PORTABLE VISE BENCH and PIPE BENDER

Some of the most prominent contractors who have been using our bench for the last five years have recently given us several individual re-orders for over 100 benches.

Don't hesitate to drop us a line and we will send you the names and addresses of hundreds of satisfied users.

STANDARD IRON WORKS, Inc.
508-10 E. 74th Street, New York City

"HAAS" WATER CLOSETS
are high grade, insuring maximum service and minimum expense
PHILIP HAAS CO., DAYTON, OHIO

Pressweld Radiators
Save 15% on Fuel

It is your patriotic duty to install them. They are light, compact, quick-heating and save space. Can be hung on wall.

Used by U. S. Government. Write for new catalog.

American Pressweld Radiator Corp., Detroit, Mich.

If you want a salesman, foreman or workman, advertise in the Classified Department of "*Domestic Engineering.*" Used by the best houses in the trade.

ders on the plumbing contract on three new factory buildings to be erected on East Thirty-fourth Street, Anderson. The heating contract was awarded to the William H. Johnson & Son Co., of 330 East St. Joseph Street, Indianapolis.

The National Heating Co., of South Bend, has been awarded the contracts for the installation of plumbing and heating systems in the power plant and boiler house, and in the St. Joseph County Tuberculosis Hospital and for remodeling the plumbing in two residences.

Jos. E. Luther, of 118 West Calfare Avenue, South Bend, is remodeling the plumbing and heating systems in the Crescent Hotel in that city.

Peoples Bros., of 121 West Jackson Street, Elkhart, have been awarded the contract for the installation of plumbing and heating systems in the factory building being erected in that city.

Simpson & Adamson, of Michigan City, have been awarded the following contracts: Plumbing and heating in F. H. Burnham Glove Co.'s new factory, and refrigeration in the addition to the Michigan City Ice & Cold Storage Co.'s plant.

Paul J. Dolan, of La Porte, is remodeling the heating system in Samuel Fox & Sons' office and warehouse.

L. R. Adamson, of the plumbing and heating firm of Simpson & Adamson, of Michigan City, has the sympathy of his many friends in the trade on account of the death of his wife, which occurred on Monday, November 11th.

Minnesota

St. Paul and Vicinity.

Plumbers of Minnesota's capital city played their part in the celebration of Victory Day, and now, as the restrictions on building construction are being gradually withdrawn, are exerting themselves to restore peace-time conditions and take full advantage of such expansion as may result from the after-the-war situation.

The outlook is most pleasing as a large number of important municipal and private building projects have been revived.

Despite the war, plumbers of St. Paul did only about a third less business last October than during the same month a year ago. Sixty-seven permits last month were for a total of $24,316, as against seventy-eight permits for $33,402 in October, 1917.

Indicative of the war-time pressure are the building permits. Last October fifty-five permits were issued for a total of $59,640 and in the same month in 1917, 136 permits totaled work valued at $325,807.

Ruse That Failed.

The called-up one volubly explained that there was no need in his case for a medical examination.

"I'm fit and I want to fight. I want to go over on the first boat. I want to go right into the front trenches, but I want to have a hospital close, so that if I get hit no time will be wasted in taking me where I can get mended right away, so that I can get back to fighting without losing a minute. Pass me in, doctor. Don't waste any time on me. I want to fight, and keep fighting!"

The doctor, however, insisted, and, when he got through, reported a perfect physical specimen.

"You don't find nothing wrong with me, doctor?"

"Nothing."

"But, doctor, don't you think I'm a bit crazy?"—"Tit-Bits."

THE REMOVAL OF MOISTURE FROM SPECIAL ROOMS AND BUILDINGS.

(Continued from Page 285.)

While a plenum condition is employed in a dye-house, which tends to force the moist air out by natural currents, an exhaust or partial vaccum condition is called for in this case, which makes use of an exhaust fan for removing the air, while the fresh air is drawn in by the slight suction produced. Induction heaters, so called, are placed before the inlets to warm the air as it enters the room, thus maintaining a normal temperature and lowering the relative humidity so as to increase the moisture-absorbing capacity of the air.

A certain amount of general room ventilation should also be provided by means of register openings into the ceiling ducts connecting with the hoods. As stated above, the entering air is tempered by passing through shallow heaters consisting of pipe coils or cast-iron sections, of the pin or similar type, which give ample air space between them.

These heaters should be made up of separately valved groups so that the temperature of the air may be easily regulated. A diagram showing the general ventilation of a laundry is given in Fig. 2, and a detail of an induction heater in Fig. 3.

Paper Machine Rooms.

While the various methods employed in the ventilation of paper machine rooms may vary in detail, the general principle is much the same in each case. It consists in supplying a sufficient volume of warm dry air to absorb the moisture rising from the machine by evaporation, and to exhaust the air from the room before it becomes quite saturated.

As previously stated, about 1.5 tons of water are given off in the drying of 1 ton of paper so that knowing the capacity of the machine, it is a simple matter to compute the weight

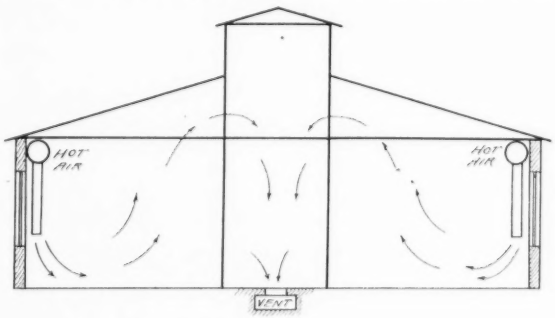

Fig. 5.

of water to be disposed of and the volume of air by means of Table I.

In practice the temperature of the entering air should not be less than 65 to 70 degrees, the actual point being governed by the heat required to maintain a room temperature between 70 and 80 degrees. The heat given off from the drying rolls is usually sufficient to raise the temperature of the air, rising from the machine, to 100 or 110 degrees in connection with the room temperatures noted above.

Example: A paper machine has a capacity of 2 tons per twenty-four hours, what volume of air will it be necessary to pass through the room per hour, when the outside temperature and humidity are 50 degrees and 70 per cent respectively, to remove this vapor assuming that the air leaves the room at a temperature of 110 degrees, at a relative humidity of 95 per cent?

Solution: Weight of water to be removed per hour = $(2 \times 1.5 \times 2000) \div 24 = 250$ pounds. Referring to Table I, we find that one cubic foot of saturated air at 50 degrees

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Closet Tank and Seat Trimmings, Connected Waste and Overflows, Traps, Supply Pipes, etc.
Any Reliable Jobber can furnish the "Femco" Line from stock
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Suction Pumps *and* Complete Water Supply Systems
pumping capacities 120 to 1,000 gallons per hour. Efficient Deep Well Pumps with Hyatt Roller Bearings and silent chain drive, pumping capacities 150 to 2,000 gallons per hour. **Write for bulletins and price sheets.**
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ROBERTSHAW MFG. CO. YOUNGWOOD, PA.
The standard for 30-40 gal. boilers, and single coil heaters or equivalent. Has ⅜-in. gas openings.
We Make All Sizes

How we took the "L" out of So(l)der
You may notice that we always spell it "soder" instead of solder. That's because Allen Fluxes take all the h—l out of sodering for the man who does the work. Allen non-acid sodering fluxes take a quick, sure "bite" and make sodering a quick sure job. Send for samples. **L. B. ALLEN CO., INC., 4526 No. Lincoln St., Chicago, Illinois.**

K-K Cleans Closet Bowls
"The Sanitary Way"
Shake a little into bowl, let remain a few minutes, then flush. Leaves bowl and trap free from stains and odors. K-K is scientifically prepared for this purpose only—not a general cleaner.
Keep a supply on hand—your trade wants it.
The Chamberlain Company
Manufacturing Chemists - - - - Pittsburgh, Use "Desolvo" for Cleaning Clogged Pipes

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make toilet rooms **odorless and sanitary.** No chemicals. In demand wherever there is a water closet.
Use on old or new work. Always satisfactory. Good profit and a business-getter for the plumber.
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¶ "NATIONAL" Pipe Advantages have been approved by practically every profession engaged in the upbuilding of our industrial and commercial activities—because "NATIONAL" Pipe has been installed in practically every wrought pipe field.
¶ See the announcement in this connection, entitled "APPROVED)", to appear December 7th!
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An Air Valve With a Reputation

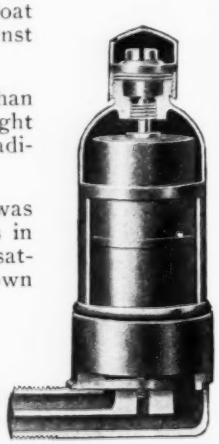
Russell's Perfect Automatic Air Valve

has a sealed metal float in the shell of the valve, which is flexible top and bottom and partially filled under vacuum with a sensitive fluid.

When cold the valve is open, freely venting the radiator of accumulated air. When steam reaches the valve, the vaporizing of the fluid expands the expansion float and closes the valve against loss of steam.

The float is lighter than water and will close tight should water enter the radiator.

Ever since this valve was put on the market by us in 1890, it has given entire satisfaction under every known heating condition.



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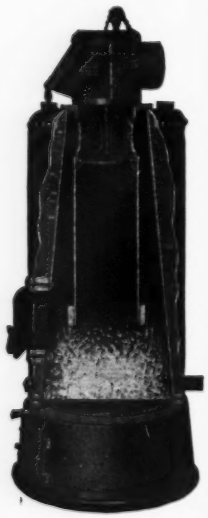
All Steel



will keep an even fire and burn only a minimum amount of fuel, even in the coldest weather. It requires attention only every ten or twelve hours. This advantage is greatly appreciated by users.

The fire is completely surrounded by water and motion of water is entirely vertical, which gives perfect circulation and greater heating capacity than most other water heaters.

No coils, bolts, flues, packing, sections or cast iron cylinders. Cannot leak. Burns any kind of coal.

Write for catalog and discount to the trade.

S. Wilks Mfg. Co.
3517 Shields Avenue
Chicago

contains 0.000587 pounds of vapor, or $0.000587 \times 0.7 = 0.0004109$ pounds with a relative humidity of 70 per cent. A cubic foot of air at 110 degrees and 95 per cent humidity contains $0.00377 \times 0.95 = 0.0035815$ pounds, so that each cubic foot of air passing through the room carries off $0.0035815 - 0.0004109 = 0.0031706$ pounds of moisture.

Therefore, to absorb 250 pounds of moisture, $250 \div 0.0031706 = 80{,}000$ cubic feet of air in round numbers, must be passed through the room per hour.

Two general methods are employed for the ventilation of paper machine rooms one making use of a large hood extending over practically the entire machine and the other substituting a number of comparatively small exhaust outlets directly above and surrounding the dryers, supplemented by vents in the roof.

In either case warm air is supplied in the volume required for the removal of the moisture produced, being admitted partly near the floor and partly in horizontal jets blown across the ceiling to prevent, as far as possible, the gathering of moisture on the under side of the roof.

The first method mentioned is shown in diagram in Fig. 4 and indicates the arrangement for the removal of air only.

The hood is constructed with a slot from 2 to 3 inches in width around the outer edge connecting with an interior chamber, which in turn connects with an exhaust fan discharging into a shaft leading through the roof. With a given volume of outflow this arrangement creates a strong outward velocity around the entire perimeter of the hood, which prevents the steam from passing out into the room.

The volumes of air handled by the supply and exhaust fans should be practically the same with any excess in favor of the former in order to prevent any vacuum effect, which might encourage the inleakage of cold air at points where it was not desired.

In the second arrangement, where individual hoods are used over the dryers, each shaft through the roof is provided with its own exhaust fan.

Air to the main room is supplied horizontally near the ceiling in sufficient quantity to give six or seven changes per hour. This is supplemented by two changes per hour delivered to the basement between the machines.

In pulp mills special ventilation is required in the grinding rooms, owing to the heavy vapor, which is given off from the logs as they are fed into the grinders. The best results are secured in rooms of this kind by arrangements similar to those already described for machine rooms, although the hoods are usually omitted. In cases of this kind sufficient warm air is supplied to produce from six to eight changes per hour, and is commonly introduced at a temperature of 120 to 130 degrees in zero weather. The distributing ducts are located in the upper part of the room and about three-fourths of the air supply discharged directly downward, the remainder being blown in jets along the ceiling. Exhaust ventilation is usually through roof vents, gravity flow being depended upon without the use of fans.

Foundries.

Buildings of this general type are best ventilated by a pair of fans, one for supply and one for exhaust. In general, the air should be admitted and discharged near the floor; first, because warmth and fresh air are needed in the zone occupied by the workmen; and, second, because the gases present are heavier than air and must be drawn off through openings near the floor.

When the work carried on is of such a nature that steam and gases are present only in small amounts, the exhaust fan may be shut down and only the supply fan used.

A typical layout of ducts and outlets for foundry ventilation is shown in Fig. 5. By means of this arrangement

the smoke is kept from collecting under the eaves in the summer time, when the exhaust fan is not running, the admission of fresh air along the outer walls tending to drive it into the monitor, from which it escapes through open windows. During the winter season, when both fans are ordinarily in operation, the warm air, on admission, slowly rises to the upper part of the room and then, as it cools, falls through the central portion and is drawn off through floor registers as indicated, carrying the heavier gases with it.

The volume of fresh air to be supplied to a foundry will depend somewhat upon its height, as the required number of changes per hour will be less in a high room than in a low one, to maintain a given standard of ventilation. An air supply equivalent to four or five changes per hour for a stratum 10 to 12 feet high over the entire floor has been found to give satisfactory results in the average case in iron foundries. Brass foundries should be supplied with two or three times this volume of air.

Wet Spinning Rooms.

Wet spinning rooms in flax mills, or similar rooms in any other manufacturing plant, where water vapor is present in large quantities, require similar treatment to that described for dye houses. Warm dry air is forced into

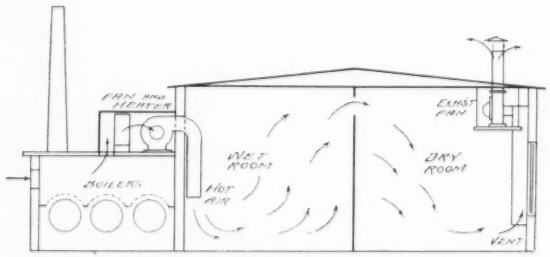


Fig. 6.

the lower part of the room in generous quantities, and the moist air forced out at the upper part.

A condition found in textile mills, and especially in flax mills, is the need of additional moisture in other departments, as in the dry spinning rooms of the latter, and the moist air taken from the wet rooms may often be transferred to the dry rooms, where more moisture is needed, and thus two results be accomplished with a single operation.

Sometimes it is possible to utilize waste heat for this purpose, as in Fig. 6, where fresh air is drawn through an enclosed space above the boilers, thus cooling the boiler room, then heated still further by a supplementary steam coil, if necessary, and passed into the wet spinning room as shown. From here the moist air passes over into the adjacent dry spinning room through openings near the ceiling and is removed from the other side of the room by way of floor vents connected with an exhaust fan.

While this illustration is shown in connection with a flax mill, the same principle may be applied to similar general conditions in other kinds of manufacturing plants, where the requirements are similar.

It is expected bids will soon be called for the erection of a federal building at Nogales, Ariz., for which an appropriation of $120,000 has been made by Congress. The building will be two stories, the postoffice occupying the ground floor, and the immigration and other offices the second floor.

Value Received

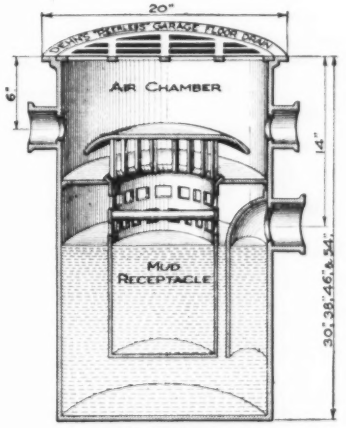


Fig. 62 Patented

When you install Dehn's "Peerless" Garage Drains your clients never stop talking about it. A wonderful installation. Value received.

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A Few Reasons Why You Should Install the EXCELSO WATER HEATER

Most satisfactory way to heat domestic water.
Saves fuel and money.
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Assures even temperature of water day and night.
Easy to install on any steam or vapor boiler.
Makes you a good profit. Every one installed sells more.
Made in three sizes for use below water line for tank capacities of 40, 70 and 100-gal. Also used to heat storage tanks of any size up to 800-gal. by use of live steam.
There are many other points in favor of the EXCELSO. Let us tell you all about it.

Capacities and Price List

When Used Below the Water Line

No. 2	40	Gal. Cap.	$20.00
No. 3	70	Gal. Cap.	30.00
No. 4	100	Gal. Cap.	40.00

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No. 1	40	Gal. Cap.	$15.00
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No. 3	250	Gal. Cap.	30.00
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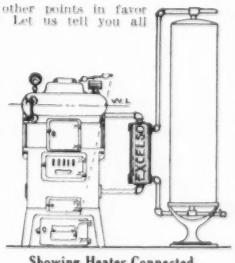
Liberal discount to the trade.



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1377 Main Street, BUFFALO, N. Y.

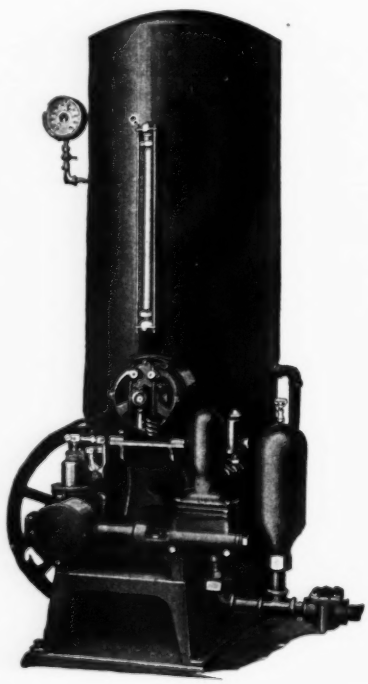
Now Is the Time

for the plumber to "cash in" on the Water Supply business. Every farm and country home that is not already equipped with adequate water supply is a live prospect for

ROBERTS
House Pumps

The ROBERTS line covers a pump or complete outfit for every requirement. They are furnished either for water or electric drive.

If you are puzzled as to the right pumping equipment for that next job, investigate the ROBERTS.



Write for literature.

The Geo. J. Roberts Co.
DAYTON, OHIO

The DAY BOOK *of the* BON TON DE LUX PLUMBING & HEATING CO.

Jerry Dolan's Record of the Interesting Happenings of the Day

(Continued from Page 251 in the November 16th issue.)

November 16, 1918.

On the way home the other day, I saw one of the sewer and water service inspectors having a chewing match with a couple of laborers, and so I stopped the flivver to get an earfull. It seems like the sewer main at this point is only down a little over 9 feet, and these fellows had installed a water service that passed right over and rested on this sewer pipe, and furthermore it was only about two feet away from a manhole. The inspector had refused to pass it, because he knows that when Jack Frost gets around, that water service would freeze up tighter than a drum, but these fellows can't see it at all. He insists that they keep at least six feet away from the manhole and run the service line under the sewer pipe so as to protect it as much as possible. They finally started to do it in the way that he directed; but, gee, how they hated to do it. It shows that we need competent inspectors, even if some of us do feel sometimes that we would be better off, if we could talk quality and personal supervision, when the owner springs that old gag about all plumbing being the same, because it has to be inspected by the same inspectors.

November 17, 1918.

Sunday. Got a card yesterday from one of the boys that used to work down at Flannigans, and on the bottom of it, he had printed "A little lesson in efficiency: If the bath tub leaks, keep the house plants under it." The rest of the card was a boost for more and better plumbing with directions as to where they would find the best plumber in town.

November 18, 1918.

We have some funny experiences with people that are trying to do their own plumbing. Lots of them come in to buy flush bulbs and most of them seem to think that there is only one size, and when we tell them that we have nine sizes, they ask for the medium size, and if that don't look just right, they ask for either a larger or a smaller one. Sometimes they bring in a water-logged old timer and want one of the same size and when we hand them one they act as if we were trying to flimflam them. Some of the tank balls absorb water like sponges. And most people seem to think that shelling out a two-bit piece ought to pay for the tank ball and leave enough for car fare home and when we tell them that our best guaranteed flush bulbs are 75 cents each, they gasp for air and act as if they had a date with a fainting spell.

November 19, 1918.

Some plumbers say that it is advisable to carry two grades and then sell a man which ever kind he wants, and I guess that's all right, too. Most of the specialty houses are now packing them in individual boxes, and that has its good points, too. It keeps the balls in first-class shape, and it adds a little tone to the sale, because a customer gets the impression that, if the ball is worth packing in that manner, it must be worthy of it, and he is reconciled to paying the price.

November 20, 1918.

The other day an old-time friend came into the shop, and it brought back memories of the days of long ago. He was and is a plumber. In those days, I was only a barefoot boy, and he was a plumber with a shop and a slate at the door. Dad got hold of a couple of lengths

of pipe and a few ells and wanted to extend a water line from the sill cock on the side of the house around to the front of the house so as to save hose. He needed a tee and asked this plumber to get one for him. I recall now that I made ten or a dozen trips before I finally got the tee and can even now recall the solemnity with which he informed me that he was letting Dad have this tee at great personal risk, as the law did not permit him to sell fittings, which he did not install and have properly inspected. I told Dad about it when I got home, and I had it all figured out that the patrol wagon would be backing up to the door before morning, and that Dad would be hustled off to the lock-up and set to making baskets, or whiskbrooms, but that much looked-for event never did occur, and the tee and pipe did valiant service for many, many years.

November 21, 1918.

I got the idea a long time ago that rubber heels were not to my liking, but I have changed my mind. It came about in this manner. I left a pair of shoes at the shop with instructions to have them half-soled, and the heels leveled up a bit. A few days later, I dropped in for them, and while waiting my turn noticed a small card board box containing a number of small paste board squares which I then noticed to be parts of the small boxes containing rubber heels. I also noticed that sending a certain number of these back to the manufacturer, would entitle the sender to certain premiums to be selected from their catalog. Just then, my shoes were brought out. They looked fine and dandy, nice new laces, well polished uppers, substantial looking half soles and rubber heels. Well, I hadn't ordered rubber heels and I didn't want rubber heels, but they were on the shoes, the shoemaker was a good customer of our plumbing shop, so I paid the bill with a smile and marched out with my shoes under my arm.

November 22, 1918.

And I have since come to the conclusion that rubber heels are all right, and the shoemaker knew more about it than I did. If a little premium for the return of a part of the original container, so as to show that a sale has been made, will stretch 25 cent jobs into 75 cent ones for the shoemaker, perhaps our plumbing manufacturers might find ways to induce the journeymen plumbers to do more selling, while they are on the job.

(To be Continued.)

THE POET'S VISION.

For I dipped into the future, far as human eye could see,
Saw the vision of the world, and all the wonder that would be;
Saw the heavens fill with commerce, argosies of magic sails,
Pilots of the purple twilight, dropping down with costly bales;
Heard the heavens fill with shouting, and there rained a ghastly dew
From the nation's airy navies grappling in the central blue;
Far along the world-wide whisper of the south wind rushing warm,
With the standards of the peoples plunging through the thunder storm;
Till the war drum throbb'd no longer, and the battle flags were furl'd
In the parliament of man, the Federation of the World.

—From Alfred Tennyson's "Locksley Hall."

McALEAR

Vapor Heating System. Vacuum Heating System.
Vacuum Air Line System.
Two-Pipe Vacuum System.

Perfect heat without noise, leakage, damage or waste.
The biggest forward step in the science of steam heating.
Preferred and endorsed by leading architects and heating engineers.

McAlear Thermo Vent Automatic Air Valve.
So designed and constructed that no adjustment is necessary either at factory or on the job. Cannot be put out of order. Fool-Proof.
Used with the McAlear Vacuum System or any other air line vacuum or drip pipe work.

No. 22

McAlear Automatic Vacuum Pump.
Adaptable to all kinds of steam heating systems, new or old.
Quick-acting. Simple. Economical.
Requires 80% less power than any other pump doing same work.
The ONLY pump that has for its power plant a thermostatic motor actuated by temperature of steam and water.
Write for Book, "25 Years of Knew How." It's free.

The McAlear Mfg. Co.
223 W. Erie St. CHICAGO

Asbestos Magnesia
Sectional Moulded Covering

for steam pipes and all high pressure work where strength and durability are required. It works easily, fits snug and does not "sag." It is light, yet tough and will not "fall" in cutting. It contains extra long fibre Asbestos, Carbonate of Magnesia and other fireproofing materials, all of excellent quality.
Always look for the "Diamond N"—it's a sign of good faith.
Write for prices

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NORRISTOWN, PA.

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The charge for advertisements under this heading is $1.00 for 25 words or less, including heading and address; 4 cents each for additional words. To insure insertion, copy and remittance should reach us by Wednesday morning.

Situations Open

WANTED—FOREMAN, STEAMFITTER, experienced in heating and power plant work. Must be able to make working drawings and estimate costs. Give age, experience, references and salary expected. Apply, Industrial Heating & Engineering Co., Akron, O. 11-23; 30

WANTED—SALESMAN FOR PITTSburgh territory to sell brass goods to established trade as side line. Excellent opportunity for right man. Give experience, etc., first letter. Globe Brass Mfg. Co., Cleveland, O. 11-23

WANTED—CAPABLE MANAGER FOR plumbing, heating and mill supply house located in South. Good opportunity and good pay. Situation now open. Address 2560, care Domestic Engineering, 407 S. Dearborn St., Chicago. 10-12; 11-30

WANTED—LIVE, UP-TO-DATE, TWIN City jobbing house wants a young man to take charge of billing department. Must be well posted in plumbing and heating line. State age, experience, references and salary wanted. Address 2568, care "Domestic Engineering," 407 S. Dearborn Street, Chicago. 11-16; 23

Situations Wanted.

POSITION WANTED — BY EXPERIenced salesman of plumbing and heating supplies. Practical man who understands laying out of work in both branches. Address 2567, care "Domestic Engineering," Chicago. 11-2-30

POSITION WANTED—BY LIVE MARried man thoroughly familiar with plumbing and heating business, as estimator or manager of plumbing and heating concern. Address 2572, care "Domestic Engineering," 407 S. Dearborn St., Chicago, Ill. 11-23/12-14

POSITION WANTED—WILL BE OPEN for position as manager or assistant manager for a plumbing and heating supply house after Jan. 1, 1919. Have had six years' warehouse experience, two years managing an office and five years calling on architects. Can furnish best of references. Address 2570, care "Domestic Engineering," 407 S. Dearborn St., Chicago. 11-23; 30

For Sale.

FOR SALE — FULLY ESTABLISHED, successfully going plumbing and heating business; established nine years in one of the largest cities in Florida. Excellent location—five-year lease. Owner interested in other line of business. Address 2571, care "Domestic Engineering," 407 S. Dearborn St., Chicago. 11-23; 30

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407 S. Dearborn St., Chicago

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The Coal Situation

has caused an unusual amount of attention to focus on the proper elimination of air from heating systems. The result of this has brought Hoffman Valves into their own for every venting service. The use of Hoffman Valves has everywhere demonstrated their high efficiency as well as coal-saving ability.

THE NO. 1 HOFFMAN SYPHON AIR VALVE

is the only **real automatic air valve.** Vents every particle of air from radiator without steam or water leakage. Does away with hissing and spitting and prevents fuel waste.

Every Hoffman Valve is permanently adjusted at our factory and guaranteed to perform its functions properly. Cannot be tampered with by meddling hands.

Tell your jobber the kind of venting service you want and he will supply you with a Hoffman Valve designed especially for the purpose.

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